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MINNESOTA:

ITS

SOURCES AND PROGRESS;

ITS

AUTY, HEALTHFULNESS AND FERTILITY;

AND ITS

ATTRACTIONS AND ADVANTAGES

S A HOME FOR IMMIGRANTS.

WITH A DESCRIPTIVE MAP.

MPILED BY THE COMMISSIONER OF STATISTICS,

AND PUBLISHED BY DIRECTION OF

HORACE AUSTIN, GOVERNOR.

ST. PAUL:
PRESS PRINTING COMPANY.
1870.

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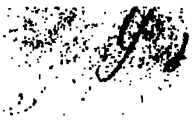

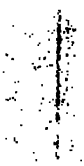

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MINNESOTA:

ITS

ATTRACTIONS, RESOURCES AND PROGRESS.

GEOGRAPHICAL AND HISTORICAL.

The State of Minnesota occupies the exact centre of the continent of North America. It lies midway between the Arctic and Tropic circles—midway between the Atlantic and Pacific Oceans—and midway between Hudson's Bay and the Gulf of Mexico. It embraces the sources of the three vast water systems which reach their ocean termini, northward through Hudson's Bay, eastward through the chain of great lakes, and southward *via* the Mississippi River. It extends from 43½° to 49° of north latitude, and from 89° 29′ to 97° 5′ of west longitude; and is bounded on the north by the Winnipeg district of British America, on the west by the Territory of Dakota, on the south by the State of Iowa, and on the east by Lake Superior and the State of Wisconsin.

The State derives its name from its principal river, which the Dakotas named "Minnesota," signifying, by a somewhat liberal and poetical rendering, "cloud-colored" or "sky-tinted water." The name is peculiarly apt and appropriate, the waters of that river, contrasted with the dark coffee-colored flood of the Mississippi, possessing that peculiar tint of a slightly clouded sky which is compounded of many colors.

This important region was almost wholly unknown to the Anglo-American long after other sections of the country, far less inviting, had been subjected to the refining influences of industry, science, and religion. Indeed, until within the last twenty-five years, few sounds, save those of wild beast and wilder men, broke the stillness of the awful solitude; and prairie, lake and river were alike

the possession of the savage aborigines. But now the steamboat plows its waters, the rail car whistles through its valleys, the axe resounds throughout its mighty forests, and the work of improvement goes forward with almost unparalleled rapidity.

The immigrant, tourist, and land surveyor have explored its utmost reach, and observation has accumulated facts, science deduced principles, and enterprise developed capabilities, which give to Minnesota a prominent position among the States of the Union; whilst the beauty of its scenery, the healthfulness of its climate, the wealth of its agricultural and mineral resources, the vastness and variety of its manufacturing facilities, and the grandeur of its commercial position, make it the most desirable of localities for the multitudes coming westward in quest of new homes, new fields of enterprise, and improved advantages for ultimate success.

Although the first actual settlement of Minnesota, and the effort to develope its vast resources, are of so recent date, nearly two centuries have elapsed since its discovery and partial exploration by white men. As early as 1680, Louis Hennepin, a Franciscan priest, in company with fur traders employed by a French exploring party, ascended the Upper Mississippi as far as the great falls, to which he reverently gave the name of Saint Anthony. The early strife for American territory between England and France resulted in the treaty of Versailles in 1763, by which all the territory now embracing Minnesota was ceded to the former power. In 1766 Captain Jonathan Carver, a native of Connecticut, a zealous royalist and enthusiastic adventurer, undertook an exploration of England's newly-acquired possessions. In the fall of that year he reached St. Anthony Falls, and ascended the Mississippi some miles further, and then returned to the mouth of the Minnesota, ascended that river, and passed the winter of 1766–7 among the Indians near the present site of New Ulm. Carver was deeply impressed with the extraordinary beauty and fertility of the country. Of the region adjacent to St. Anthony Falls he left this glowing description:

"The country around them is extremely beautiful. It is not an uninterrupted plain where the eye finds no relief, but composed of many gentle ascents, which in the summer are covered with the finest verdure and interspersed with little groves that give a pleasing variety to the prospect. On the whole, when the Falls are included, which may be seen at the distance of four miles, a more pleasing and picturesque view I believe cannot be found throughout the universe."

The Northwestern Territory, including what is now Minnesota,

was transferred to the United States in 1783; but no attempt was made to extinguish the Indian title until 1805, when a purchase was made of a tract of land for military purposes at the mouth of the St. Croix and another at the mouth of the Minnesota River, including St. Anthony Falls. Upon the latter was commenced the construction of Fort Snelling, in the summer of 1820. In 1822 the first mill was built in Minnesota. It was erected under the supervision of the officers of the fort, for the use of the garrison.

The summer of 1823 is memorable for the arrival of the first steamboat, the Virginia, at Mendota, opposite Fort Snelling. A few years subsequent to this period, a company of Swiss, from the Selkirk settlement, located near the site of Saint Paul, and were the pioneers of agriculture in Minnesota.

During the year 1832 the first regular mail was brought to Fort Snelling. Measures were being taken by the government to obtain a title from the Indians to the lands east of the Mississippi, and in anticipation of the event, settlements had been commenced as early as 1836, on the east side of the river, between Saint Paul and Fort Snelling. In 1838 the Indian title to this section became extinct.

In 1843 was commenced the settlement of Stillwater, on the Saint Croix, and the erection of a saw-mill at that place. Up to this time the section now known as Minnesota had belonged to various successive territorial organizations, having no separate government of its own. But on the third of March, 1849, Congress passed a bill organizing the Territory of Minnesota, whose boundary on the west was the Missouri River, designating Saint Paul as the capital, and appointing Alexander Ramsey, of Pennsylvania, as Governor.

At this time Minnesota was an unexplored wilderness, the home of the savage, the hunting-ground of the half-breed and the resort of the fur trader and government officials. All the lands on the west, and a large portion of those on the east side of the Mississippi, were still in the possession of the original inhabitants. Saint Paul and Stillwater were small villages, and other settlements mere hamlets. The whole population of the Territory was but little over four thousand. At the opening of navigation came the first great wave of immigration. On the first of June the Governor proclaimed the Territory duly organized. On the third of September was convened the first legislative assembly.

Thus, in rapid succession, transpired those events which gave Minnesota a distinct existence, and an important position among

the States of the Union. In the year 1851, in consequence of a treaty with the Indians, the lands on the western side of the Mississippi were opened for settlement. Two years later these Indians were removed to their new homes on the Upper Minnesota.

The tide of immigration was now setting in with irresistible force. The emigrant wagon wended its way over bluff and prairie; the wharves were crowded with boats loaded with new comers from the valleys of the Wabash and Ohio, from the banks of the Hudson and Kennebec, from the green hills of Vermont and the ocean shores of Massachusetts; and mingled with these were representatives from nearly every country of Northern Europe. Here congregated the idle wanderer, the man of broken fortune and lost health, the hard-handed laborer, the shrewd, calculating man of business, the restless, keen-eyed speculator, the capitalist, student, and politician; the lady of fashion, and the care-worn mother with the infant in her arms.

Villages suddenly expanded into cities; towns sprang up on the water-courses; magnificent schemes were formed for future aggrandizement; money was abundant; and excitement, speculation, and fortune-making were almost the sole pursuits of the masses.

Suddenly came the great financial crisis, in 1857, when speculation collapsed, money disappeared from the market, property depreciated in value with the rapidity with which it had been inflated, and immigration almost entirely ceased. Upon immigration, the Territory was, at that time, almost wholly dependent for its rapid growth of population; upon such growth of population was founded the enhanced value of property; and upon such advance of property were based the exacting and fabulous rates of interest which were eagerly paid by sanguine speculators. Thus the schemes of the day, the calculations of business and the expectations of a generous future, were instinct with a common hope; and when the supporting cause in these linked dependencies gave way, the unsubstantial fabric fell, burying its builders in its ruins.

It is difficult to exaggerate the extent and vital character of this sudden revulsion. The most princely fortunes vanished like shadowy dreams. With men rated among the wealthiest it was not now a question of meeting a maturing obligation or compassing a cherished scheme in the future, but the more urgent one of averting present starvation from their families. Fast horses were put to the plough, stylish equipages disappeared, holiday apparel was refurbished for new service, and expectant fortune hunters sought by unwonted labor to earn an honest livelihood.

The people thus made wiser by reverses, turned instinctively to

the unreckoned wealth of the virgin soil. Labor with its necesssities and rewards possessed a new significance and achived new wonders. The irrepressible energy of these young communities found ample exercise in the development of our vast agricultural resources, and perhaps the world affords no parallel to the progress witnessed during the two years ending with 1860. In 1854 the cultivated area embraced but 15,000 acres; in 1857 it was estimated at 48,000; in 1860 it had reached a grand total of 433,267 acres!

Thus it appears that the dawn of agricultural prosperity in Minnesota was co-incident with the great financial revulsion, and one of its most natural results. But the most important result of this crisis, and that which was peculiarly favorable to the future growth of Minnesota, was the instantaneous check given to speculation in Western lands. In many of the Western States the speculator preceeded the emigrant, bought up at government price as soon as they were offered in the market, and still holds in native wildness, some of the fairest sections of the Mississippi Valley.

Fortunately in Minnesota a concurrence of circumstances rescued the largest and best portion of the State from this dire hindrance to settlement and progress. Most of the public lands here could be obtained only under the provisions of the pre-emption laws, which required an actual settlement as a condition of transfer by the government: the financial embarassment soon followed and kept aloof the speculator, till the timely passage of the Homestead Act saved the public lands forever from his grasp.

And now, while large portions of Illinois, Wisconsin, and Iowa lie idly in the hands of speculators who hold the lands at prices far above the reach of the mass of immigrants, the equally fertile lands of far healthier Minnesota are reserved for the future homes of the frugal and industrious people who are flocking to us from Northern Europe, and from the overcrowded localities of the Eastern States. Here they may find the bountiful soil, the beautiful scenery, the crystal streams and limpid lakes, the bracing climate, the liberal institutions and fostering influences adapted to the home of a noble race, who shall reap here the just reward of industry, enterprise and a laudable ambition.

Congress having passed an enabling act, a State Constitution was formed in the summer of 1857. The fall following, State officers and members of Congress were chosen; and on the 11th day of May, 1858, the State was formally admitted into the Union.

Minnesota nobly responded to the various calls of the general

government for aid against her enemies in the great civil war. She furnished the loyal cause more than 24,000 troops, or one-seventh of her entire population; and their conduct in the most trying situations, measured by whatever test of courage, endurance or discipline, answered the highest expectations of them as citizen soldiers, and reflected lasting honor upon the State.

The year 1862 will ever be memorable in the history of the State as the epoch of the terrible Indian massacre, which hardly finds its parallel in the annals of savage barbarity. The year had opened auspiciously for Minnesota. Congress had just passed the Homestead Act, immigration was on the increase, population and improvement were reaching westward, the fields promised an abundant harvest; when suddenly came the merciless marauder upon our defenceless frontier settlements; whole families were massacred, villages burnt, and thousands of industrious, prosperous citizens driven penniless from their desolated homes. Stringent measures were promptly adopted for the suppression of this savage outbreak. Many of those most directly guilty suffered at the hands of the executioner, and not only all concerned in the massacre, but the remnant of the Sioux not implicated, and all the hitherto peaceful Winnebagoes, were, as a precaution, removed to a new reservation on the Missouri River. The only Indians still remaining in the State are a few bands of distant, feeble and friendly-disposed Chippewas. With the more important of these a treaty was concluded in 1862, by which their title to about 10,000 square miles of territory, embracing the fertile valley of the Red River of the North was extinguished, leaving only a small portion of inferior land in this State still in the hands of the Indians.

Those sad days are now happily past. Since 1863 not a hostile Indian has been in the State or near it. Peace and security prevail throughout our borders. The tide of immigration has resumed its course hither with augmented volume, remote and fertile sections are being made accessible by the extraordinary development of our magnificent railroad system; agricultural and manufacturing industry is advancing with unparalleled rapidity; educational facilities are being developed and extended under a magnificent land endowment; and it may in short be confidently claimed that in no part of the world has there been achieved progress in all the aids to prosperity, power and happiness, comparable to that which the past five years have witnessed in favored Minnesota.

BEAUTY AND FERTILITY OF THE STATE.

In Minnesota are found neither the illimitable level prairies which distinguish Illinois, nor the vast impenetrable forests of Indiana and Ohio, in which the settler finds it so difficult to carve himself a home; but a charming alternation of woods and prairie, upland and meadow, characterizes the topography of this State.

The general surface of the country is undulating, similar to the rolling prairies of the adjoining States of Iowa and Wisconsin; with greater diversity, beauty, and picturesqueness imparted to the scenery by rippling lakes, sparkling waterfalls, high bluffs and wooded ravines.

To the general evenness of the surface, the high lands known as the *Hauteurs des Terres*, form the only exception. These are a chain of drift hills in the northern part of the State, commonly with flat tops, rising from 80 to 100 feet above the level of the surrounding country. Among these hills lie embedded the lakes that give rise to the three great rivers of the continent. The Mississippi, pursuing a southward direction, over ledges of limestone, through fertile prairies and rich savannas, gathering its tributaries from a country of great fertility and nearly equal in extent to one-third the area of Europe, pours its waters into the Gulf of Mexico. Eastwardly, through lakes, rivers and foaming cataracts, flow the waters of the St. Lawrence system, finding their way into the Atlantic. Northward runs the Red River, by a circuitous route to Lake Winnepeg, where it mingles with waters brought from the Rocky Mountains by the Saskatchewan, and rolls onward to Hudson's Bay.

Three-quarters of the State may be generally described as rolling prairie, interspersed with frequent groves, oak openings, and belts of hard-wood timber, watered by numberless lakes and streams, and covered with a warm, dark soil of great fertility. The rest, embracing the elevated district immediately west of Lake Superior, consists mainly of the rich mineral ranges on its shores, and of the pine forests which clothe the head-waters of the Mississippi, affording inexhaustible supplies of lumber.

OFFICIAL AND SCIENTIFIC TESTIMONY.

General, then Captain, Pope was commissioned in 1849 to make a topographical survey of Northwestern Minnesota. In his

official report to Congress he used the following glowing language touching the beauty and resources of that region:

"I have traversed this territory from north to south, a distance of 500 miles, and with the exception of a few swamps, I have not seen one acre of unproductive land." Again: "The examination of a portion of this territory during the past summer has convinced me that nature has been even more lavish in her gifts of soil, than in her channels of communications."

"I know of no country on earth where so many advantages are presented to the farmer and manufacturer."

"In this whole extent it presents an almost unbroken level of rich prairie, intersected at right angles by all the heavily-timbered tributaries of the Red River, from the east and west—the Red River itself running nearly due north through its centre, and heavily timbered on both banks with elm, oak, ash, maple, &c., &c. This valley, from its vast extent, perfect uniformity of surface, richness of soil, and the unlimited supply of wood and water, is among the finest wheat countries in the world."

Of the region surrounding Otter Tail Lake the same writer says:

"The whole region of country for fifty miles in all directions around this lake, is among the most beautiful and fertile in the world. The fine scenery of lakes and open groves of oak timber, of winding streams connecting them, and beautifully rolling country on all sides, renders this portion of Minnesota the garden spot of the Northwest. It is impossible in a report of this character, to describe the feelings of admiration and astonishment with which we first beheld the charming country in the vicinity of this lake; and were I to give expression to my own feelings and opinions in reference to it, I fear they would be considered the ravings of a visionary or an enthusiast."

"Carlton," of the *Boston Journal*, who accompanied the party who examined the route of the Northern Pacific Railroad in July, 1869, speaks thus of a portion of the same section of country:

"How exhilarating to gallop over the pathless expanse amid a sea of flowers, plunging now and then through grass so high that horse and rider are almost submerged. * * *

"The buffalo are gone. The ox and cow are coming to their place. Sheep and horses will soon fatten on the rich pasturage of these hills. We of the East would hardly call them hills, much less mountains, the slopes are so gentle and the altitudes so low. * * *

"On our second day's march we came to a section of country that might with propriety be called the park region of Minnesota. It lies amid the highlands of the divide. It is more beautiful than even the country around White Bear Lake and in the vicinty of Glenwood. Throughout the day we ride amid such rural scenery as can only be found amid the most lovely spots of England.

"Think of an undulating country, rounded hills, with green slopes—of lawns and parks and countless lakes—calm waters reposing amid the hills, skirted by forests, fringed with rushes, perfumed by the lilies, or

of the waves rippling on graveled beaches; of wild geese, ducks, loons, pelicans and innumerable water fowl building their nest amid the reeds and rushes; think of lawns as blooming with flowers, of elk and deer browsing amid the meadows. This is their haunt. We see their tracks along the sandy beaches, but they keep beyond the range of our rifles.

"So wonderfully has nature adorned this section, that it seems as if we were riding through a country that has been long under cultivation, and that behind yonder hillock we shall find an old castle, or at least a farm house, as we find them in Great Britain.

"I do not forget that I am seeing Minnesota at its best season, that it is midsummer, that the winters are as long as in New England; but I can say without reservation that nowhere in the wide world, not even in England, the most finished of all lands; not in *la belle France*, or sunny Italy, or in the Valley of the Ganges, or the Yanktze, or on the slopes of the Sierra Nevada, have I beheld anything approaching this region in natural beauty.

"How it would look in winter I cannot say, but the members of our party are unanimous in their praises of this park region of Minnesota. The land is unsurveyed, and the nearest pioneer is forty miles distant, but land so inviting will soon be snapped up by settlers."

Of the Red River Valley the same writer says:

"The sun shines through a mellow haze, while all around as far as the eye can see there is such richness of verdure, such wealth of greenness and display of flowers, that the language descriptive of the Elysian fields and the choicest and best of poesy is too forceless and feeble to convey an idea of the richness and beauty of this fair region of the world."

Col. J. J. Abert, chief of the Topographical Engineers, in a report to the War Department, in 1854, described a portion of Southern Minnesota as "abounding in rolling prairies, with timber generally near, soil rich and offering many inducements to the immigrant;" and he speaks elsewhere of the "beautiful sheets of water fringed with timber," and of "beautiful groves of oak, relieving the monotonous appearance of the prairies."

David Dale Owen, the eminent geologist, speaking of Southern Minnesota, designates it as "a fertile, well watered and desirable farming country." The same writer, describing another portion of the same section, says:

"The scenery on the Rhine with its castellated heights has been the admiration of European travelers for centuries. Yet is is doubtful whether in actual beauty of landscape it is not equalled by that of some of the streams that water this region of the far West."

J. N. Nicollet, a scientific explorer, in a report to the War Department, gave the name of "Undine Region" to the fertile and admirably watered country around the great bend of the Minnesota River, describing it as "of a most picturesque appearance;"

and he further avers that this and the Minnesota Valley "exceed any land on the Mississippi River above the Wisconsin River as well in the quality of their timber as in the fertility of their soil."

Captain Jonathan Carver, who explored this country more than a century ago, spoke of the Minnesota Valley as "a most delightful country, abounding with all the necessaries of life, that grow spontaneously." He speaks of

"Trees bending under the loads of fruits, meadows covered with hops and many sorts of vegetables, the ground stored with useful roots, and eminences a little distance from the river, from which you have views that cannot be excelled, even by the most beautiful of those I have already described."

G. W. Featherstonaugh, an English traveler, in 1835, in his "Report of a Geological Reconnoisance," speaks of this valley as "extremely beautiful—charming slopes, with pretty dells intersecting them, studded with trees as gracefully as if they had been planted with the most refined taste."

Prof. Owen, speaking of the Lake Superior region, says: "The scenery of the whole extent of the ranges north of the lake is bold and picturesque."

A. H. Hanchette, State Geologist, speaking of the rivers flowing into Lake Superior in this State, says:

"The majority of these streams have their sources in lakes and low lands away beyond the ranges, and running nearly parallel with each other, cut down through them and find their way to the great lake, over rippling cascades or frowning precipices magnificently high."

Major Long, of the U. S. Army, speaks of the scenery of the Mississippi as "bold, wild, and majestic," and describes one of the falls on the north shore of Lake Superior as

"Equalling Niagara in the grandeur and sublimity of its scenery, although less extensive, the fall being 130 feet, but with features equally terrific—the deep intonation more sensible and having a nearer resemblance to the roar of distant thunder and the rumbling of an earthquake."

The "Dalles" of the St. Croix river are every year attracting tourists in increasing numbers, by their wild and picturesque beauty. The falls of Minne-ha-ha, the "laughing waters," have been so immortalized by Longfellow's "Hiawatha" as to require no description; while the equally beautiful cascade, "Minne-inne-opa," near Mankato, annually elicits expressions of admiration from thousands of delighted visitors. Scores of other rare features might be named which contribute to the charms of our scenery.

As a concise general description of the landscape of Minnesota it may finally be said that

"The number and beauty of its groves and belts of timber, which

crown the undulations of the uplands or shadow the margins of the streams, break up the monotony of the prairie into forms of infinite variety and beauty, and unite all the elements not only of successful husbandry, but of delightful landscape in the limits of almost every farm."

Of this beautiful and fertile region, fashioned by the lavish hand of nature, and awaiting the developing hand of industry, J. A. Wheelock, Esq., former Commissioner of Statistics, used the following striking language in his official report for 1860:

"All the circumstances of its position and structure indicate it as the imperial domain of agriculture in its highest development, of an agriculture reposing on the most perfect conditions; no longer isolated and rustic, but elevated to the rank of a glorious art by the appliances of science and mechanism; the genius of a civilization in which commerce shall be slave instead of mistress, to carry the affluence and culture of cities through the ramifications of its natural and artificial highways, to all the homes of a people at once rural in their virtues and metropolitan in their refinements."

MINERALS.

The northeastern corner of the State comprises a mineral field, which, if we may trust the deductions of geologists, will be inferior only to agriculture as a source of wealth.

COPPER.—Copper abounds in the mineral belt stretching along the northern shore of Lake Superior; and large masses of the pure metal have been taken from Knife and Stuart rivers. The editor of the *St. Paul Press*, in October, 1863, says:

"Three several mines are being worked on the Minnesota coast of Lake Superior. * * * Any one at all acquainted with the copper-bearing formations of Lake Superior, can but see that this State has a rich mineral district, which has only to be examined and brought into notice, to secure immediate and extensive working. The three workings now started at distant localities, will prove highly satisfactory, as scarcely a break occurs through the entire range, from the St. Louis river to the British boundary, at an elevation of from six hundred to one thousand feet."

The lower magnesian limestone and sandstone, near Lake Pepin, according to Dr. Owen, are metaliferous, yielding lead and copper. But no mines have as yet been attempted.

IRON.—Iron ore is found in considerable quantity around Portage and Pigeon rivers. The metal wrought from this ore has been put to the severest test, and found fully equal in tenacity and maleability to the best Swedish and Russian iron. The growing

importance of this mineral resource may be inferred from the table of shipments of iron ore from the Superior district, which shows a rapid increase.

An iron ore is also found in several localities, between the Blue Earth and Le Sueur rivers, which is said to yield thirty-one per cent. of light-grey iron.

COAL.—A coal bed has recently been discovered in Brown County, on the Cottonwood River, in the vicinity of New Ulm, and is being worked; but the extent and value of this formation is not yet ascertained. Should Minnesota, however, prove to be wanting in this valuable mineral, the deficiency can shortly be supplied at a cheap rate from the immense coal fields of Iowa. These fields are said to cover an area of 25,000 square miles; and a railroad system is in process of construction, which, when completed, will place them practically in the neighborhood of the mineral district of Lake Superior.

GOLD AND SILVER.—A geological survey made under the auspices of the State, in the summer of 1865, developed the existence of the precious metals on the shores of Vermillion Lake, 80 miles north of the head of Lake Superior. Scientific analysis attested the presence of gold and silver in sufficient quantities, as was supposed, to justify an expensive effort to extract them. Accordingly, joint stock companies were formed and a considerable expenditure of labor and capital has been made, but while the existence of the precious metals in considerable quantities is not doubted, their extraction is attended with too much cost in that inaccessible situation to warrant a continuance of the effort.

SLATE.—Vast bodies of slate of good quality exist in some portions of the State. Mr. Thomas Arnold who recently explored the State lands on St. Louis River, in the interest of the Mississippi and Lake Superior Rail Road Company, reported as follows:

"Taking this section all through, I think it is the largest and most immense body of slate that I have ever heard of. Mr. Humphrey, who is a Welchman, and has worked in the largest quarries in Wales (in some of which they work three thousand men,) coincides with me in this opinion. It will, of course, require considerable work and expenditure to arrive at the per centage of pure workable slate in this huge mass.

"In concluding this diary I would make the statement, however strange it may seem, yet is nevertheless true, that three-fourths of the whole slate in this region lies on the railroad lands. There is slate and room enough to employ ten thousand hands, but for a basis of calculation, if three thousand men were employed, they could, as is usual at quarries now working in the East, produce three-fourths of a square per day for each hand; allowing twenty days to the month would produce fifteen

squares per man per month, or one hundred and eighty squares per man per year, which, for three thousand would be 540,000 squares per annum.

"Allowing these men common wages for skilled and common labor, say three dollars per day, would be equal to four dollars per square; adding for incidental expenses say fifty cents per square, would make a cost delivered on cars of four dollars and fifty cents per square. Total cost of production per annum say $2,430,000. These slates are readily worth on board of cars, seven dollars per square, which would make a total amount of gross earnings $3,780,000, leaving a net profit of $1,350,000."

LIME.—The burning of lime has been pursued to a large extent from the first settlement of the State, the extensive beds of stone everywhere found affording abundant material for its prosecution on a large scale.

SALT.—Among the valuable mineral resources of this State are the salt springs of the Red River Valley. These reservoirs of salt are the beginning of a series of saline springs that reach westward on the international boundary line to the Rocky Mountains; some of these springs, even with the imperfect apparatus used by the Indians, are said to yield one bushel of good salt to twenty-four gallons of brine, or 33½ per cent.

BUILDING STONE.—Limestone suitable for building purposes, is found in immense out-croppings below the Falls of Saint Anthony, on the Mississippi and its tributaries, which forms another considerable item of wealth. That nearest the surface is of a greyish rock, easily quarried and worked, but incapable of a high polish. Underlying this formation, in many localities, is a close-grained limestone of a bluish color, highly valuable for buildiug purposes. A variety occurs at Saint Peter, resembling marble, and susceptible of a fine polish.

The limestone near the mouth of the Cottonwood contains ninety-four per cent., and that near the mouth of the Minnesota sixty-four per cent. of the carbonate of lime; and indeed all these formations are rich in this element, and consequently valuable for building.

Within the past two years the ledge of granite which makes its appearance near Sauk Rapids, has been brought into considerable use for building purposes. Its solid blocks form a bealtiful and important feature in the construction of the St. Paul Custom House, as well as in the facings of other handsome structures throughout the city. Large bodies of granite exist in the northeastern part of the State.

WHITE SAND FOR GLASS.—A sandstone of remarkable purity, composed of limpid and colorless quartz, varying from forty to one hundred feet in thickness, is found overlying the limestone

formation at Fort Snelling, and along the Mississippi below the Falls of Saint Anthony, to Red Rock. Subjected to chemical analysis by Nerwood, this stone gave but two-tenths of one per cent. of foreign matter, which is alumina, with a trace of a carbonate of lime, and is pronounced by him even purer than the celebrated Linn sand used by Scotch manufacturers of flint glass.

Prof. Owen's (U. S. Geologist) report says: "The St. Peter's (Minnesota River) country certainly can afford as pure a quality of sand as that obtained in Missouri, and now, I believe, extensively used in the glass houses of Pittsburg."

PEAT.—Prof. Henry H. Eames, State Geologist, 1866, says in his official report: "In nearly every portion of the State are immense deposits of peat, and the supply for all practical purposes is inexhaustible."

TRIPOLI.—He describes a bed of tripoli near Stillwater as of "very fine quality," "inexhaustible for all practical purposes," and "a source of wealth to the State."

CLAY.—There is an abundance of clay underlying the soil in the larger portion of the State, of which brick of a good quality are made. Beds of marl, adapted to the manufacture of pottery, are found in various places; and a bed of fine porcelain clay is reported in Wabasha county.

LAKES.

The number, beauty and picturesqueness of its lakes, form a marked feature in the scenery of Minnesota. These lovely little sheets of water are found dotting its surface in nearly every section of the State, sparkling on the open prairie, hidden in the depths of its primal forests, and glistening like gems of beauty among the ragged hills of its northeastern section. They are from one to thirty miles in diameter. Some of them are of a circular form, others of an exceedingly irregular outline. The water of these lakes is remarkably clear and pure, resting upon a basin of quartzose sand and pebbles, among which the jasper, agate, and cornelian appear conspicuous. These lakes are sometimes found isolated, having no outlet; others are the manifest reservoirs whence issue the mighty rivers of the continent; and again others, connected by channels, form systems extending through long reaches of country; and yet again others, connected by rivulets into groups during the wet season, are isolated in a dry time, the intervening valleys being converted into meadows, cranberry

marshes, and swamps. Some of these lakes are surrounded by hard, gravelly shores; others encircled by an embankment several feet high; around some the greensward touches the water's brim; others are fringed with wild rice and various aquatic plants of rare beauty. These lakes abound with a great variety of fish of superior flavor and quality; and in spring and autumn they are the resort of immense numbers of wild geese, ducks, and other water fowl.

Prof. Maury, former Superintendent of Washington Observatory, says:

"We see, with these beautiful sheets of water, nature has done for the Upper Mississippi what Ellet proposed should be done by the Government for the Ohio, and what Napoleon III is doing for France. Every one of these thousand lakes is a reservoir for the rains in the wet season, which it reserves to fill up the rivers in the dry—at least this is one of their offices, for they have many."

"Minnesota is far from the sea, but it is a better watered country than either Kansas or Nebraska. Indeed it may be considered the best watered State in the Union; and it doubtless owes its abundance of summer rains measurably to the lake system."

"Carlton," the eloquent writer before quoted, speaking of Minnesota lakes, says:

"The larger lakes are bordered by parks and groves, presenting landscapes of indescribable beauty. Many a pioneer on this Norwestern verge of civilization may look out from the door of his log cabin on scenery as enchanting as any in old England. True, there is no background of mountains, no rocky crag, or deep and tortuous defiles; but there are undulations, sunny slopes, gentle swells, rounded wood-crowned summits, looking down upon lakes and ponds dotted with emerald islands, or clear waters dancing in the sunlight or reflecting from the glassy surface the transcendental beauty of the landscape.

"This region is attractive not only because of its soil and genial clime—not because there is great prospect of material wealth—but here nature has done much to promote that æsthetic culture, without which a community never can reach the highest plane of civilization. Here, in coming years, on the borders of these lakes, costly mansions will be reared. Where now the pioneer feeds his pigs will be seen parks and lawns."

The number of these lakes, large and small, was estimated by Schoolcraft at 10,000. This was probably an overestimate, but we have the authority of Prof. Maury for the assertion that "there is in this Territory a greater number of these lovely sheets of laughing water than in all the country besides. They give variety and beauty to the landscape; they soften the air, and lend all their thousand charms and attractions to make this goodly land a lovely place of residence."

RIVERS.

Minnesota has six navigable rivers. The Mississippi, originating in Lake Itasca, takes a circular sweep northward, and then pursues a southeasterly course, running about 800 miles through the State, of which 130 wash its eastern boundary. It is navigable in all about 540 miles within the State.

The St. Croix rises in Northwestern Wisconsin, flows in a southerly direction into the Mississippi, and forms about 130 miles of the eastern boundary of Minnesota. It is navigable for 53 miles.

The Minnesota River, the principal tributary of the Mississippi on the west, rises in the Coteau des Prairies, in Dacotah Territory, and extending into Big Stone Lake, on our western boundary, flows with a vast sweep through the heart of the State, and empties, 470 miles from its source, into the Mississippi, five miles above Saint Paul. It is navigable in favorable seasons about 300 miles, and during the dryest months 50 miles.

The Red River of the North rises in Minnesota near the source of the Mississippi, and after a circular sweep southward flows almost due north, forming the northwestern boundary of the State, a distance of 380 miles. It is navigable in most seasons about 250 miles.

The St. Louis River flows into Lake Superior on our northeastern boundary, a distance of 135 miles, 21 of which are navigable.

Root River, a tributary of the Mississippi, in Southern Minnesota, has a length of about 75 miles, 24 of which are navigable.

Besides these the largest rivers are the Rum, Crow, Sauk, Elk, Long Prairie, Crow Wing, Blue Earth, Le Sueur, Maple, Cobb, Watonwan, Snake, Kettle, Red Wood, Wild Rice, Buffalo, Chippewa, Marsh, Pomme de Terre, Lac qui Parle, Mustinka, Yellow Medicine, Two Rivers, Cottonwood, Cannon, Zumbro, Whitewater, Cedar, Red Lake, Straight, Vermilion, and others. These with a vast number of smaller streams tributary to them, ramifying through fertile upland and grassy meadow in every section of the State, afford invaluable facilities for the various purposes of lumbering, milling, manufacturing and agriculture.

TIMBER.

As before remarked, Minnesota is neither a timber nor a prairie State; yet it possesses in a large degree the advantages of both, there being unquestionably a better proportion of timber and prairie, and a more admirable intermingling of the two than in any other State, excepting possibly, Wisconsin. It is estimated that about one-third of Minnesota is timbered land, of more or less

dense growth. In Iowa it has been officially estimated that only about one-tenth to one-eighth of the State is timbered. On the head waters of the various tributaries of the extreme Upper Mississippi and St. Croix rivers is an extensive forest country, known as the "pine region," comprising an estimated area of 21,000 square miles. Extending in a north-easterly and south-westerly direction, about 100 miles long, and an average width of 40, is the largest body of hard-wood timber between the Mississippi and Missouri rivers. It lies on both sides of the Minnesota River, comprising in all an area of 5000 square miles, and is known as the "big woods." This extended forest abounds in small lakes, and in some portions it is broken by small prairies and openings covered with a luxuriant growth of grass. Elsewhere timber is found in detached groves, and bordering the numerous rivers and lakes, and a scattered growth of stunted trees called "oak openings" usually skirt the prairies.

GAME.

The prairies and forests abound in a great variety of wild animals, among which are deer, bears, wolves, foxes, wild-cats, raccoons, and rabbits. Otter, mink, beaver, and muskrat, are the principal aquatic animals that frequent the water-courses. Buffaloes occasionally visit the western frontier. Pigeons, grouse, and partridges, are among the feathered game; whilst multitudes of smaller birds, of sweet song and gay plumage, add their thousand charms to the summer landscape of Minnesota.

FISH.

The numerous lakes of Minnesota abound in fish of many varieties—pickerel, bass, pike, sun fish, and nearly all kinds of small fish. The waters of these lakes are of such extraordinary transparency, that the finny inhabitants are plainly seen at a depth of twenty feet, and perhaps in no part of the world is the sport of fishing more enjoyed than in the crystal streams and limpid lakes of Minnesota.

CLIMATE.

Prominent among the questions proposed by the emigrant seeking a new home in a new country, are those concerning the climate, its temperature, adaptation to the culture of the grand staples of food, and its healthfulness.

The climate of Minnesota has often been the subject of unjust disparagement. "It is too far north;" "the winters are intolerable;" "corn will not ripen;" "fruit will not grow." These and other similar remarks have found expression by those who should have known better. To the old settler of Minnesota, the seasons follow each other in pleasing succession. As the sun approaches his northern altitude, winter relaxes his grasp, streams and lakes are unbound, flowers spring up as if by the touch of some magic wand, and gradually spring is merged into the bright, beautiful June, with its long, warm days, and short, but cool and refreshing nights. The harvest months follow in rapid succession, till the golden Indian summer of early November foretells the approach of cold and snow; and again winter, with its short days of clear, bright sky and bracing air, and its long nights of cloudless beauty, completes the circle.

It will be remembered, that though Minnesota has no mountain peaks, its general elevation gives it the characteristics of a mountainous district; that, while it is equi-distant from the oceans that wash the eastern and western shores of the continent, and is therefore comparatively unaffected by oceanic influences, it has a great water system of lakes and rivers within its own borders. These, combining with other influences, give the State a climate in many respects dissimilar to the other northern States.

One of the most striking of the peculiarities of this climate, is the great variation between the extreme cold of winter, when mercury occasionally congeals, and the intense heat of midsummer, when it stands for many consecutive days at 95° above zero, in the shade.

But these extremes afford no index to the real character of the climate of Minnesota. Fortunately, we have ample means by which to determine its actual temperature, and also its temperature compared with other and more widely-known localities.

From records kept for a series of years, at different places, the Commissioner of Statistics, in his report for 1860, furnishes the data for the following summary: Central Minnesota has a mean temperature, in the spring (45.6°,) equal to Northern Illinois,

Southern Michigan, Massachusetts, and Rhode Island. Its summer mean temperature (70.6°) coincides with that of Central Wisconsin, Southern Pennsylvania, and Central New Jersey. Its autumn temperature (49.5°) is the equivalent of Central Wisconsin, Northern New York, New Hampshire, and Southern Maine. Its winter mean temperature (16.1°) equals that of Northern Wisconsin, the southern limit of Canada East, Central Vermont and New Hampshire, and Northeastern Maine.

Its yearly mean temperature (44.6°) coincides with that of Central Wisconsin, Michigan, Central New York, Southern Vermont, New Hampshire, and Maine, and has a range from the summer heat of Southern Ohio and Southern Pennsylvania. Thus, in the breadth of four degrees, the summers of Pennsylvania and Sardinia (in Italy,) are followed by the winter of Canada and Northern Russia.

From rain tables, prepared from observations recorded for a series of years at sixteen different places in Canada and the States, it appears that the mean yearly fall of rain for all the places is 35.5 inches; whilst the mean yearly fall at Fort Snelling is 25.4 inches; and the mean summer fall for all the places is 11.2 inches; whilst the mean summer fall at Fort Snelling is 10.9 inches.

Thus it will be seen, that while Minnesota had a yearly fall of rain ten inches less than the mean of all the places, its summer rain is but a fraction of an inch less than the mean summer rain of all the places. It may be added, that one-half of the spring rain falls in the month of May, and a fraction more than one-half of the rains of autumn falls in September, giving more than two-thirds of the whole yearly amount of rain to the season of vegetable growth, and leaving but the small fraction to the remaining seven months of the year.

Judging from the climate of New England, where the air is loaded with vapor from the ocean, and the ground is for months covered with deep snow; or judging from the more southern of the Western States, where rain and sleet are followed by severe cold, it has been concluded that winter in Minnesota is a season of terrible storm, deep snow, and severe cold. The average fall of snow is about six inches per month. This snow falls in small quantities, at different times, and is rarely blown into drifts so as to impede traveling. The first snow fall of November usually lays on the ground till March, affording protection to the winter grain. Occasionally at midday a slight thaw occurs in places with a southern declivity. Two or three times in the course of eight or ten winters, the ground has been uncovered for a few days. Long,

driving snow storms are almost unknown, and rain seldom falls during the winter months.

It is well known that dampness is the element whence comes suffering, whether of cold or warm weather.

With an average temperature of 16°, the dry atmosphere of winter in Minnesota is less cold to the sense than the warmer yet damp climate of States several degrees further south. With the new year commences the extreme cold of our Minnesota winter, when, for a few days, the mercury ranges from ten to thirty degrees below zero, falling sometimes even below that. Yet the severity of these days is much softened by the brilliancy of the sun and the stillness of the air. Thus, while other States, in lower latitudes, are being drenched by the cold rain storms, or burried beneath huge drifts of wintry snow, Minnesota enjoys a dry atmosphere, and an almost unbroken succession of bright, cloudless days, and serene, star-lit nights; and when the moon turns her full-orbed face towards the earth, the night scene of Minnesota is one of peerless grandeur.

The farmer improves the winter season by preparing fencing and fuel, and drawing to market the surplus products of his last year's toil. Lumbermen are busy in the forests getting ready logs to be borne on the swollen streams of spring to the various lumber manufactories. Winter in Minnesota is a season of ceaseless business activity and constant social enjoyment; and by those accustomed to long wintry storms, and continued alternations of mud, and cold, and snow, pronounced far preferable to the winters in any section of the Northern States. Here there is an exhilaration in the crisp atmosphere which quickens the blood and sends the bounding steps over the ringing snow with an exultant flurry of high spirits akin to the highest enjoyment.

March brings an average temperature of 31° and a small increase of rain. Snow and ice disappear, and the ground is gradually prepared for the plow. April, with a rise of temperature to 46°, and a rain fall of two inches, commences the season of vegetable growth. As the season advances, the warm south winds, freighted with the vapor of southern seas, prevail; lake and stream send forth their exhalations; gentle and frequent showers descend; and Minnesota—with the summer warmth of Southern Pennsylvania, Long Island, and New Jersey—with the long days that, at the solstice, scarce admit of darkness between the evening and morning twilight—presents a scene of rapid vegetable growth and maturity scarcely paralleled in any country.

ADAPTATION OF CLIMATE TO AGRICULTURE.

Scientific men have determined that the successful cultivation of Indian corn requires a temperature of 67° for July, and of 65° for the summer. Minnesota has a summer temperature of 70°, and a temperature for July of 73°. The cultivation of wheat is said to require a mean temperature of from 62° to 65° for two of the summer months. Thus it will be seen that the climate of Minnesota is well adapted to the successful cultivation of all the cereals.

The fact established by climatologists, that "the cultivated plants yield the greatest products near the northernmost limit at which they will grow," finds abundant illustration in the productions of Minnesota. It is a well known fact that cereals raised in the southern latitude, are far inferior in quality to the same kind produced in the cooler climate of the north.

In southern latitudes, the warm spring developes the juices of the plant too rapidly. They run into the stalk and leaf, to the neglect of the seed. Corn, for example, rises thirty feet high in the West Indies, but it produces only a few grains at the bottom of a spongy cob, too coarse for human food. In the Southern States the corn stalk is fifteen feet high, but the product is much less than in the Northern States, where the stalk is seven to ten feet high—and so of all plants which can be grown at all at the North. The cool, late springs of northern climates restrain the undue luxuriance of the stem or leaf, and throw the chief development of the plant into the ripening period. With the summer heat of Southern Ohio, Minnesota yields a greater product of a given plant, and of a richer quality, because its cooler springs check the expenditure of the vital juices on the stalk and leaf, to lavish them on the fruit. On the other hand, with the same springs as Massachusetts, Minnesota produces more abundant harvests, because it has a warmer summer. It thus combines the most favorable conditions of quantity and quality in its products—and the remark applies equally to all the cereals, the esculent roots, and the wild grasses of the country, which are as rich as the cultivated species in lower latitudes. Its wheat, barley, potatoes, &c., are in high favor throughout the Mississippi Valley.

But the best evidence of the rare adaptation of the climate, as well as the soil of Minnesota, to agriculture, are the incontrovertible statements of its bountiful products hereafter shown in this pamphlet.

SALUBRITY OF CLIMATE.

Of paramount importance to the emigrant, is the healthfulness of the locality which is to be the scene of his future labors and the home for himself and family. What to him are fair fields, flowering meadows, buried in the luxuriant growth of fertile soils and tropical suns, if they generate fever-producing miasm and vapor? What are soft and perfumed breezes, if they waft the seeds of pestilence and death? What are bountiful harvests of golden grain, and rich and mellow fruits, and all the wealth the earth can yield, if disease must annually visit his dwelling, and death take away one by one the loved and the young?

It is well known that some of the fairest portions of the Western States are so fruitful of the causes of disease, as almost to preclude settlement, And multitudes have left their comparatively healthy New England and European homes, to find untimely graves in the rich soil of Indiana, Illinois, Missouri, and Iowa. And even in sections of these States deemed most healthy, the climate has an enervating effect upon those accustomed to the bracing air of Northern Europe and the Eastern States.

The absence of medical statistics and records of disease and mortality, can hardly be subjects of regret, in presence of that ample and varied testimony to the healthfulness of the climate of Minnesota, which has already made the young State the resort of the diseased from all sections of the Union.

The dryness of the air, the character of the soil, which retains no stagnant pools to send forth poisonous exhalations, the universal purity of its water, the beauty of its scenery, and the almost total absence of fog or mist; the brilliancy of its sunlight, the pleasing succession of the seasons, all conspire to give Minnesota a climate of unrivalled salubrity, and to make this the home of a joyous, healthy, prosperous people, strong in physical, intellectual, and moral capabilities. And while the chilly, damp winds from the Atlantic are sowing broadcast the seeds of that terrible disease, pulmonary consumption; while the malarious exhalations from the undrained soil of Indiana, Illinois, and other States of the Southern Mississippi Valley, yield an annual harvest of fevers,—Minnesota enjoys an almost entirely immunity from both. If fever and ague occur, the germ was imported; if consumption claims its victim, the cause is to be sought elsewhere than in the climate of Minnesota.

TESTIMONIALS AS TO HEALTHFULNESS.

But let those testify who are either wholly uninterested, or whose interest springs from a grateful consciousness of restored health resulting from a sojourn in Minnesota.

Surgeon G. K. Wood, U. S. Army, speaking of the advantages of a northern over a southern climate in cases of consumption, says:

"The present injudicious course of sending consumptives to the hot, low, and moist coast, and the islands of the Gulf of Mexico, should be abandoned. In diseases of debility the remedies are tonics and stimulants. What is more debilitating than affections of the lungs? and what less tonic than heat and moisture combined, as is found in the climate of the Gulf Coast? It is simply not cold, and has no other advantage over the Northern States."

Disturnell, author of a work on the "Influence of Climate in North and South America," says that "*Minnesota may be said to excel any portion of the Union in a healthy and invigorating climate.*"

Rev. Dr. Horace Bushnell, of Hartford, Conn., distinguished at home and in Europe for his genius and learning, writes:

"I went to Minnesota early in July, and remained there till the latter part of the May following. I had spent a winter in Cuba, without benefit. I had spent also nearly a year in California, making a gain in the dry season and a partial loss in the wet season; returning, however, sufficiently improved to resume my labors. Breaking down again from this, only partial recovery, I made the experiment now of Minnesota; and submitting myself, on returning, to a very rigid examination by a physician who did not know at all what verdict had been passed by other physicians before, he said, in accordance with their opinions, 'You have had a difficulty in your right lung, but it is healed.' I had suspected from my symptons, that it might be so, and the fact appears to be confirmed by the further fact, that I have been slowly, though regularly, gaining all summer. * * * * *

"It does not follow, by any means, that one who is dying of hereditary consumption, or one who is too far gone to have any powers of endurance or spring of recuperative energy left, will be recovered in the same way. A great many such go there to die, and some to be partially recovered, and then die: for I knew two young men so far recovered as to think themselves well, or nearly so, who, by over-violent exertion, brought on a recurrence of bleeding, and died; one of them almost immediately, and the other in about twenty-four hours—both in the same week. The general opinion seemed to be, that the result was attributable, in part, to the over-tonic property of the atmosphere. And I have known of very many remarkable cases of recovery there, which had seemed to be hopeless. One, of a gentleman who was carried there on a litter, and became a hearty, robust man. Another, who told me that he coughed up bits of his lungs of the size of a walnut, was then, seven or eight months after,

a perfectly sound-looking, well-set man, with no cough at all. I fell in with somebody every few days, who had come there and been restored; and with multitudes of others, whose disease had been arrested so as to allow the prosecution of business, and whose lease of life, as they had no doubt, was much lengthened by their migration to that region of the country. Of course it will be understood that a great many are sadly disappointed in going thither, and that as the number of consumptives making the trial increases, the funerals of the consumptive strangers are becoming sadly frequent. The peculiar benefit of the climate appears to be from its dryness. There is as much, or even a little more of rain there than elsewhere in the summer months, but it comes more generally in the night, and the days that follow brighten out in a fresh, tonic brilliancy, as dry almost as before. The winter climate is intensely cold, and yet so dry, and clear, and still, for the most part, as to create no very great suffering. One who is properly dressed, finds the climate much more agreeable than the amphibious, half-fluid, half-solid, sloppy, grave-like chill of the East. The snows are light—a kind of snow-dew, that makes about an inch, or sometimes three, in a night. Real snow storms are rare: there was none last winter. A little more snow, to make better sleighing, would be an improvement. As to rain in winter, it is almost unknown. There was not a drop of it last winter, from the latter part of October, to the middle or about the middle of March, except a slight drizzle on Thanksgiving Day. And there was not melting snow enough for more than eight or ten days, to wet a deer-skin moccasin, which many of the gentleman wear all winter."

Rev. H. A. Boardman, D. D., of Philadelphia, who sought Minnesota for his health, wrote as follows:

"In the stores and shops, on the streets and by the fireside, it is an every-day experience to meet with residents who came to Minnesota one, two, five or ten years ago for their health, and having regained it decided to remain. I have talked with some who, having recovered, went away twice over, and then made up their minds that to live at all they must live here. The common mistake with consumptives is that they defer coming until it is too late. Every train brings its quota of invalids, and among them there are apt to be some whom no skill but that of the Great Physician could relieve. Far better if they had stayed at home to 'die among their kindred.' But on the other hand, there are witnesses here by the hundred to testify to the healing virtue of this climate in the incipient stages of pulmonary disease. Let one example stand for many.' Last evening I met a gentleman who gave me this narration: 'In April last, my young danghter, 13 years of age, had a severe hemorrhage. She grew thin and pale, and was evidenlty hastening to the grave. My physician said, 'Take her to Minnesota.' I brought her here and rented a small house in the suburbs of Minneapolis, (at the Falls of St. Anthony,) and left her in charge of her nurse, with instructions to ride out every day, except in the rain. I find her now with four inches added to her height, and thirty pounds to her weight; the pain in her chest entirely gone, and no shred of disease left except a slight hoarseness.' * * *

"It appears that the mortality of St. Paul for 1867 was 1.30 per cent.,

or about four deaths to every three hundred inhabitants. As these statistics include strangers and sojourners, as well as residents, they illustrate the singular salubrity of the climate more forcibly than any other class of facts."

"It is pleasant to be able to add that the society of St. Paul is cultivated and refined, and its people eminently hospitable. These are graces which tourists, and still more invalids, know how to appreciate."

Right Rev. Thomas L. Grace, of the Catholic Church, Bishop of St. Paul, in McClung's work on Minnesota, says:

"From my experience during a residence of nearly ten years in Minnesota, I can confidently testify to the very remarkable salubrity of the climate, at all seasons of the year. Though the winters are long, the prevailing temperature is moderate. Intervals of severe cold weather occur occasionally, but they are not usually of longer continuance than three or four days at a time. The dry, bracing air of Minnesota is pleasant compared with the damp, raw atmosphere that characterizes the winters of more southerly States. The agricultured advantages of the State are deservedly regarded as among the very best."

Rev. Dr. F. T. Brown, of St. Paul, writing of a remarkably cold day in the winter of 1868, says:

"The sky was without a cloud; not a breath of air was stirring, and the stillness and perfect quiet of everything was that of a Sabbath in summer. I went to my study as usual, and felt no unusual sensation of cold. In fact, the exhilaration of being out in, and breathing the air, was purely delightful. My Sabbath School met at nine o'clock, and was attended as usual. Quite small children were present, who had come two miles. My own children were all out, though one of them is but five years old, and none were suffering from the cold. The church services, morning and evening, were attended much as usual. In short, the intense cold seemed to trouble no one. In the evening I had occasion to walk two miles to see a sick man, and suffered no inconvenience from the cold. * * * * *

"I have in my congregation men and women who removed here from Maryland, Virginia, Kentucky and Mississippi, and they all enthusiastically declare that it does not *seem* so cold here as it often did in the States whence they came. I can now understand Dr. Kane's statement, that he could, without inconvenience, stand 70° below zero, if no wind were blowing. And fortunately, here the coldest days are the stillest days."

Prof. R. T. Trall, M. D., founder of the New York Hygeio-Therapeutic College, says:

"The clear, dry, bracing, atmosphere and invigorating climate of Minnesota have long enjoyed a world-wide reputation, especially in cases of incipient consumption, confirmed dyspepsia, bronchial and rheumatic affections, and have been extensively resorted to by invalids from the Eastern States and Europe. And it is well known, that invalids can bear without discomfort, in a dry atmosphere, a temperature of 30° to 40° below the disagreeable point of the damp and chilly atmosphere of the Atlantic coast."

Dr. Brewer Mattocks, of St. Paul, contributed an article to the *Medical Record*, in which he described the peculiar climate of Minnesota in its action upon the lungs, and answered the questions so frequently asked "who will be benefitted by a residence in Minnesota?" and "at what stage of the disease tuberculous patients should be brought here?" as follows:

"To the first question I reply, all who would be benefitted by a tonic course of treatment. Minnesota possesses a tonic climate, bracing and stimulating; and that it affords remarkable immunity from disease is proved by the fact that in 1868 but six American-born persons died of consumption in St. Paul, and the entire mortality was but one in eighty-two. But a certain class of pulmonary patients should not come here; those who cannot endure cold, and who are seemingly 'withered up' by it. They are, as a general thing, of a phlegmatic temperament, anæmic and bloodless, having no life or vitaliny, and desiring none. Such should be sent South, although there is usually but little hope for such patients. But another class, who are of a nervous-sanguine temperament, who say they will or they won't, and dread and shrink from the South, saying they cannot breathe there, will be benefited by the dry, bracing air of Minnesota. Bronchical patients, also, contrary to the general supposition, should come here.

To the second query, "At what stage of the disease should consumptives come to Minnesota?" Dr. Mattocks replies:

"As a general rule, when they can travel without inconvenience or much fatigue. 'The sooner the better, even before the cough, if consumption is expected. The golden opportunity is missed if the patient waits beyond the period which the inconsiderate call laziness, for the cure of which, perhaps, the well-meaning, but injudicious physician prescribes exercise; a period often overlooked at the time—a stage called the pre-tubercular stage.'"

By the census of 1860, Minnesota exhibited the smallest number of deaths in proportion to population, of any State in the Union excepting Oregon; and this exception is easily accounted for by the absence in that State both of a full quota of children, among whom is the greatest mortality, and of the consumptives from other States, who, in the last stages of the disease, flock to Minnesota only to swell our mortality list.

The following comparative statement exhibits the proportion of deaths to population in several countries of Europe and America, and in several States of the Union:

Austria	1 in 40	Upper Canada	1 in 102
Denmark	1 in 45	Lower Canada	1 in 92
Belgium	1 in 43	Minnesota	1 in 155
England	1 in 46	Wisconsin	1 in 108
Norway and Sweden	1 in 41	Iowa	1 in 93
Prussia	1 in 39	Illinois	1 in 88

Kansas	1 in 74	Texas	1 in 64
Michigan	1 in 101	Louisiana	1 in 57
Missouri	1 in 67	Florida	1 in 79
Ohio	1 in 94	Pennsylvania	1 in 96
Indiana	1 in 88	United States	1 in 74

SOIL.

The soil of Minnesota may be divided into four geological classifications—limestone, drift, clay, and trap. Scientific analysis developes the presence in due proportion of elements of extraordinary fertility in each of these, comparing favorably with the most celebrated soils of the world. This theoretic excellence is amply confirmed by the practical results of agriculture as will be hereafter shown.

Mr. Wheelock, formerly Commissioner of Statistics, speaks generally of the soil of the State, as follows:

"The prevailing soil of Minnesota is a dark, calcareous, sandy loam, containing a various intermixture of clay, abounding in mineral salts and in organic ingredients, derived from the accumulation of decomposed vegetable matter for long ages of growth and decay. The sand, of which silica is the base, forms a large proportion of this, as of all good soils. It plays an important part in the economy of growth, and is an essential constituent in the organism of all cereals. About 67 per cent. of the ash of the stems of wheat, corn, rye, barley, oats, and sugar-cane is pure silica, or flint. It is this which gives the glazed coating to the plants, and gives strength to the stock. Now this silica is an acid, and, as found in some soils, is insoluble, and cannot be appropriated for the use of the plant. But it readily combines with lime, soda, magnesia, potash, alumnia, iron, and magnesia, forming silicates upon these alkalies, and in this condition is readily available to the use of the plant, and forms an essential element in the growth of the cereals. When the sand exists, therefore, as free silica, as in the sand barrens of New Jersey, or the drift soils of Upper Wisconsin, the soil is sterile. But when it exists in the form of silicates, in combination with the earthy alkalies, it forms a valuable constituent of a fertile soil. But another feature of the sands of the drift stratum of Minnesota is, that they are derived from fossiliferous rocks, abounding in the ancient remains of plants or animals, which probably will account for the fact that the poorest and lightest soils in Minnesota, possessing the least organic sediments, often exhibit a high degree of fertility. Furthermore, the predominance of sand in the structure of the soil of Minnesota, in attracting and disseminating the heat of the sun through its porous texture, is an important agent in the warmth of the soil.

"According to the experiments of Prof. Schubler, the following figures show the capacity of different earths to retain warmth, taking limestone sand at 100: limestone sand, 100; silicaous sand, 95.6; potter's clay, 76.9; pure grey clay, 66.7; ploughland loam, 70.1.

"The superiority of sand, in giving a high temperature to the soil, is a great advantage in a climate in which the limited period of vegetation requires the highest measures of heat.

"Another important feature of the soil of Minnesota is, that its earthy materials are minutely pulverized, and the soil is everywhere light, mellow, and spongy, existing naturally in the condition reached in soils less favorably constituted, by expensive under-drainage. With these uniform characteristics, the soils of Minnesota are of different grades of fertility, according to local situations, or the character of the underlying rocks from which their elements have been derived."

But the rare excellence of the soil of this State, as well as the favoring conditions of climate, will be best shown by the official statements under the caption following.

AGRICULTURE.

Perhaps no single fact exhibits with greater force the extraordinary development of our State than the unprecedented enlargement of her cultivated area. This in 1850 was 1,900 acres, in 1869 it was 1,690,000 acres.

The following statement shows the number of acres of tilled land at various periods since the Territorial organization of Minnesota in 1849:

	Acres.		Acres.
Cultivated area, 1850..	1,900	Cultivated area, 1866..	895,412
Cultivated area, 1854..	15,000	Cultivated area, 1867..	1,092,593
Cultivated area, 1859..	345,000	Cultivated area, 1868..	1,387,470
Cultivated area, 1860..	433,267	Cultivated area, 1869..	1,690,000
Cultivated area, 1865..	630,000		

This exhibits an increase of nearly 900 fold during the 19 years ending with 1869.

But this remarkable growth is shown to have been achieved mainly since the giddy reign of wild speculation which was overthrown with the financial crash of 1857. In 1858 grain and nearly all kinds of produce were imported from other States, to feed the people, who were universally engrossed in unproductive land trades. The development of the unreckoned wealth of the soil began earnestly in 1859, when a surplus for export was produced for the

first time. After a lapse of nine years, the general results of agriculture for 1868, are officially stated as follows:

Product.	Acres Cultivated.	Bushels Produced.
Wheat,	858,316	15,381,022
Oats,	212,064	7,831,523
Corn,	129,909	4,849,936
Barley,	18,150	518,500
Rye,	2,713	52,100
Potatoes,	24,475	2,592,636
Buckwheat,	1,538	25,292
Beans,	1,027	13,371

Wool, pounds,	422,500
Butter, pounds,	4,475,000
Cheese, pounds,	166,182
Hay, tons,	430,750
Sorghum, gallons syrup,	81,375
Maple Sugar, pounds,	250,467
Maple, gallons syrup,	14,105
Flax, pounds fibre,	101,237
Flax, bushels seed,	3,345
Tobacco, pounds,	11,293
Clover Seed, bushels,	232

Miscellaneous Products, value, $230,420.

The total home value of the above products, at a low estimate, was $26,000,000.

AGRICULTURE AND POPULATION.

A comparison of the growth of population with the development of agriculture, affords the following results:

Years.	Population.	No. acres cultivated.	Tilled area per capita.
1860,	172,022	433,267	2.5
1865,	250,099	630,000	2.5
1869,	450,000	1,690,000	3.7

This statement illustrates the extraordinary fact that from 1860 to 1865, a period embracing a savage outbreak upon our frontier, an exceptional and ruinous drouth of two years' duration, and a desolating civil war, the development of agriculture kept even pace with the growth of population, while during the subsequent peaceful years the progress in agriculture has far outstripped the increment of population.

A comparison of the products of Minnesota with those of Iowa

and Ohio, as shown by the official returns of each for the year 1868, affords the following exhibit of averages:

	Wheat.	Oats.	Corn.	Barley.	Rye.	Buckwheat.	Potatoes.
Minnesota,.	17.9	36.9	37.3	28.5	19.2	16.4	105.9
Iowa,.....	9.95	28.3	37.12	23.07	13.28	9.49	81.01
Ohio,.....	11.31	23.86	34.37	20.38	9.30	10.97	72.12

Here is certainly food for honest pride in the agricultural capacity of Minnesota—an attestation beyond cavil of her superiority in the production of each of seven leading crops over that of two noble States, justly classed, next to ours, as the most productive in the Union! She not only far excels these States in her specialty, wheat, but surpasses both in their own specialty, corn.

WHEAT CULTURE.

Wheat-growiug has been termed the "back-bone of agriculture." When the vital importance of maintaining and increasing the production of a grain so essential to civilized man is considered, it cannot be assigned a less conspicuous place in agricultural anatomy. Wheat is pre-eminently the food of civilized nations, and perhaps there can be no surer measure of their civilization than the culture and consumption of that cereal. History affirms its agency in shaping the power and character of nations. They have grown sturdy and progressive in the ratio of wheat consumption by all classes. Scientific analysis confirms the indications of history. Anatomy and chemistry show that food to be best which gives toughness to muscular fibre, and tone to the brain: that nutriment to excel which best rescues the flagging spirits when the energies lie prostrate, without maddening stimulants.

That wheat fulfills all these conditions is not only attested by the character and fate of nations, but is susceptible of scientific demonstration. The nice adjustment of its vital properties supports brain and blood and muscle, in just the proportion requisite for the highest type of manhood. Refinement, fortitude and enterprise most distinguish those nations which most consume wheat. Beef-eating and wheat-consuming races, at once dominate and elevate the rice and pork consumers with whom they come in contact. England who has long been the conceded mistress of the seas, and whose dependencies well-nigh encircle the globe, has so stimulated and enlarged her capacity for wheat growing that her annual average is 28 bushels per acre. But her consumption so far outruns her production, that she lays the world under contribution for her supplies of bread. Russia, who not only feeds her own vast population but exports largely to hungry communities abroad, is

advancing to an exalted place among nations with a rapidity second only to that of the United States. But a more practical as well as serious aspect of the subject pertains to those social problems connected with supplies of bread. The grave significance of the question involved is not susceptible of concealment when the fact is considered, that while the consumption of wheat, as the choice food of the human race, is rapidly extending, the capacity of wheat-growing regions for its production is rapidly diminishing.

According to the census of 1860, the entire wheat product of New England was sufficient to feed her own people only three weeks! that of New York sufficient for her own consumption six months; that of Pennsylvania, after feeding her own people, afforded no surplus; while the surplus of Ohio was but 3,000,000 bushels for that year, and for the past six years her wheat crop has fallen below her own consumption. In the ten years ending in 1860, the wheat crop of these States decreased 6,500,000 bushels.

In the light of these facts the achievements of Minnesota in wheat growing, as well as her untaxed capacity for its continued and increased production, assume a proud pre-eminence. Her crop in 1869 was 18,500,000 bushels, and her surplus not less than 14,000,000. Both in the average per acre and in the relative magnitude of operations, she leads the sisterhood of States. From 1859, in which year wheat occupied 34 per cent. of the whole cultivated breadth, there has been a constant absorption of area by that grain, so that 1868 witnesses its occupancy of 61.86 per cent. of the total breadth cultivated.

The following statement shows the total production of wheat and the average per acre for the years designated:

Years.	Bushels produced.	Average per acre.
1859,	2,374,415	19.
1860,	5,101,432	22.05
1865,	9,475,000	22.7
1866,	7,921,442	14.46
1867,	10,014,828	14.64
1868,	15,381,022	17.9
1869,	18,500,000	18.5

From the average of eleven years, ending with 1869, a yield of 17 bushels per acre may be assumed as the established wheat average of Minnesota. Particular localities, sometimes embracing whole townships, produce frequently an average of 25 and 30 bushels, while averages exceeding 40 bushels are not unfrequent in favorable seasons in nearly every county in the State. The largest

known yield of Ohio, one of the leading wheat States, was 17⅛ bushels per acre, while the average for the twelve years ending in 1868, in that State, as officially shown, was but 10.72 bushels per acre. In 1859, that State produced an average of 7½ bushels; Iowa, 4⅓ bushels; while Minnesota the same year produced an average of 19 bushels. Illinois, according to high local authority, produces from year to year not more than 8 bushels of wheat per acre, while only four States, by the census of 1850, reached an average of 15 bushels per acre.

Another striking illustration of the relative position of Minnesota in wheat growing, will be seen in the following comparative statement of product to population:

	Bushels wheat to each inhabitant.
Minnesota, 1868, - - -	40.47
Iowa, 1868, - - -	17.25
Ohio, 1860, - - -	10.10

OATS.

Oats is peculiarly a northern grain. It is only with a comparatively cool atmosphere that this grain attains to the solidity, and yields the return which remunerate the labor and cost of production. The rare adaptation of the soil and climate of Minnesota to the growth of this grain, is shown not only by the large average, but superior quality of the product, the oats of this State being heavier by from three to five pounds per bushel than that produced elsewhere.

The following is an exhibit of the result for the several years named:

Years.	No. acres sown.	No. bushels produced.	Average yield per acre.
1860,	68,714	2;912,857	42.39
1866,	187,023	4,372,477	23.32
1867,	162,722	5,620,895	34.54
1868,	212,064	7,831,523	36.9
1869,	286,286	12,310,298	43.

The following is a statement of the product of oats in Minnesota, compared with that in the other States named:

	Average per acre.	Years.	Bushels to each inhabitant.
Ohio, average of 11 years, . .	23.	1859	6.3
Iowa, 1868, ...	28.3	1868	17.8
Minnesota, 1868, ...	36.9	1868	20.6

CORN.

The foregoing exhibits abundantly sustain the extraordinary

capacity of Minnesota for the production of those cereals which are best produced in high latitudes. Our State is often supposed to be too far north for corn. This is a great mistake, founded on the popular fallacy that the latitude governs climate. But climates grow warmer towards the west coasts of continents, and although its winters are cold, the summers of Minnesota are as warm as those of Southern Ohio. *The mean summer heat of St. Paul is precisely that of Philadelphia*, five degrees further south, while it is considerably warmer during the whole six months of the growing season than Chicago, three degrees further south. The products of the soil confirm these meteorological indications.

The average yield of corn in 1860 was 35⅔ bushels per acre, and in 1859—a bad year—26 bushels. By comparison, in the latter year, Iowa produced but 22½ bushels per acre, and Ohio, the Queen of the corn States, but 29 bushels. In Illinois—of which corn is the chief staple—Mr. Lincoln, late President of the United States, in the course of an agricultural address in 1859, stated that "the average crop from year to year does not exceed 20 bushels per acre."

These results, so favorable to Minnesota as a corn growing as well as wheat growing State, will surprise no one who is familiar with the fact established by climatologists, that "the cultivated plants yield the greatest products near the northermost limits at which they will grow."

The following shows the corn product of Minnesota for the years named:

	Area.	Bushels.	Average.
1859, - -	117,500	3,073,749	26.16
1860, -	80,782	3,143,577	35.67
1866, - -	88,183	2,056,747	23.32
1867, -	100,648	3,216,010	31.95
1868, - -	129,909	4,849,936	37.33

COMPARISON WITH OTHER STATES.

A comparison with other States affords the following exhibit:

	Bushels per acre.
Ohio, average of nineteen years, - -	32.8
Iowa, average of six years, - -	31.97
Minnesota, average of seven years, -	30.17

In order to insure the fairness of this comparison, a just annual average is given, embracing such years as include both the highest and lowest known yield in each State named. The result is certainly a refutation of the notion that Minnesota

is exclusively a wheat State, lying too far north for corn. She suffers little by this comparison with two of the representative corn States of the Union, and should suffer still less when it is remembered that the newer and more rapidly growing a State is, the larger is the proportion of corn planted by the newly-arrived settlers directly on the sod, in the rudest manner and without culture, from which process little more than a third of an average crop is ever expected. The average of the whole is thus reduced. With thorough cultivation, crops of 50 to 60 bushels per acre are obtained, while a yield of 75 to 80 bushels is not an unusual occurrence.

BARLEY.

The following shows the yield of barley for several years in Minnesota:

	Acres.	Bushels.	Average.
1860,	9,073	301,539	33.23
1867,	11,862	316,715	26.7
1868,	18,150	518,500	28.5
1869,	25,410	813,120	32.0

The average product compares with other States as follows:

	Bushels per acre.
Minnesota, average of four years,	30.10
Iowa, average of three years,	22.11
Ohio, average of nine years,	19.29

RYE AND BUCKWHEAT.

These crops are produced in great abundance and of the best quality in this State, but the far greater facility and profit with which more valuable products are grown, have caused a contraction of the area formerly assigned to their culture. The average product in this and other States will be seen in the following comparative statement:

	Rye.	Buckwheat.
Minnesota,	19.2	16.4
Iowa,	13.28	9.49
Ohio,	10.43	10.97

POTATOES.

The well-known principle established by climatologists that "cultivated plants yield their greatest and best products near the northermost limits of their growth," applies with peculiar force to the production of potatoes. The mealy quality, the snowy whiteness, the farinaceous properties, and the exquisite flavor which

distinguish the best article, reach perfection only in high latitudes. The potatoes grown in Minnesota are well known to be unsurpassed in all the qualities named, while their prolific yield is not less remarkable. A product of 250 and 300 bushels per acre is frequently obtained, while 400 and even 500 bushels have been produced under favorable circumstances. The average yield in Minnesota and other States is here shown:

	Bushels per acre.
Minnesota, average for five years,	120.76
Iowa, average for five years,	76.73
Ohio, average for nine years,	74.55

STOCK AND WOOL GROWING.

The cost of transportation which absorbs much of the profit of wheat culture in localities distant from the market, is forcing attention to the peculiar advantages of Minnesota for stock raising and wool growing. Prominent among these are: 1. The richness and luxuriance of the native grasses. The statistics of the hay crop of 1860 show a total product of 300,000 tons, with an average of over two tons per acre, being sixty per cent. more than the average of Ohio. The grass is mainly cut on the meadows which everywhere checker the rolling prairies or fringe the countless streams and lakes. 2. The great extent of unoccupied land, affording for many years to come a wide range of free pasturage. 3. The remarkable dryness and healthfulness of the winter. The sleet, slush, mud, and the train of diseases which the damp and variable winters of Eastern or Southern climates inflict upon animals and men, are here nearly unknown. The cold, dry air sharpens the appetite, and promotes a rapid secretion of fat, and a vigorous muscular development. The wool grows finer and heavier, and mutton, beef, and pork sweeter and more juicy. The effect of climate and the rich herbage is seen in the

DAIRY PRODUCTS.

In the census year 1860, over 3,000,000 pounds of butter and cheese were made from 38,938 cows, or 77.6 pounds per head, against 52 pounds per head in Iowa, 46.8 in Illinois, and 62 in Wisconsin.

The amount of hay, wool, and dairy products for 1868, was as follows:

Hay, tons,	430,750
Wool, pounds,	422,500
Butter, pounds,	4,475,000
Cheese, pounds,	166,182

OTHER PRODUCTS.

Beans, flax, tobacco, hops, hemp, sorghum, maple sugar, beets, cabbages, pumpkins, peas, lettuce, and all kinds of garden vegetables are grown in great abundance, while the exquisite flavor and fresh crispness of all table esculents grown in the quick black soil of Minnesota is a subject of universal remark.

LIVE STOCK.

The number of the different kinds of live stock in the State for the years 1860 and 1869 is here shown:

	1860.	1869.
Horses,	16,879	98,980
Cattle,	106,009	275,977
Mules and Asses,	384	2,450
Sheep,	12,595	135,450
Hogs,	104,497	109,000

—which were altogether valued at $15,561,887, for the latter year.

FRUIT.

Nearly all the varieties of "small fruits," native and cultivated, thrive well in Minnesota.

Gooseberries, cranberries, whortleberries, blackberries, strawberries, black and red currants, and raspberries, of excellent quality, are abundant. The wild grape is found in sheltered localities, and the cultivated varieties common in the Northern States, ripen perfectly. The wild crab is common. The native plum is a fruit of much value, not only because some of its sub-varieties are free from astringency, and are desirable as dessert fruit, but that also there is a marked improvement in size and quality, under judicious cultivation.

APPLES.

It cannot be denied, that until the last two years, the question of raising apples successfully in this State was one of serious doubt. The great majority of the earliest efforts to produce them proved failures. But it is believed that our experience is but a repetition of that of other States in this respect. There is, indeed, a singular uniformity in the results of attempted fruit culture in all new countries, the first efforts having been unsuccessful with scarcely an exception. Michigan is to-day the leading fruit State of the Union, yet it is but a few years since there was scarcely less doubt of the issue of her experimental apple culture than has heretofore

prevailed as to such result in Minnesota. It is not surprising that in an entirely new field, in a different climate, and with new conditions, the expectations of those bringing here only the trees and experiences of their original homes, should be disappointed. Each new State has been obliged to begin at the beginning, raise new varieties, and make such selections as *time* and multiform experience proved adapted to its soil and climate.

Minnesota is just emerging from this transitional experience. The great abundance and varieties of apples exhibited at the various county fairs in 1869, have at length settled the question. Along the entire extent of the bold, bluffy country bordering the Mississippi River, numerous orchards have hastened forward into bearing condition and brought their gladdening reward to justify the faith of their cultivators. A fair proportion of the residents of the river towns of Red Wing, Lake City, Wabasha and Winona, are, in the winter of 1869–70, eating daily and plenteously, apples of Minnesota growth. Lieut. Gov. Yale laid in a winter supply of superb apples last fall which were grown in the orchards in the western vicinity of Winona, and a considerable proportion, perhaps one-fourth, of the residents of that city are this winter consuming Minnesota apples exclusively. Orchards bearing from 75 to 200 bushels each are comparatively frequent. The names of at least 20 farmers in Winona county are known who produced each over 100 bushels of apples this year. Nor are these of inferior growth or limited to a few varieties. One fruit grower produced 24 well developed varieties, a specimen of one of which weighed 14 ounces. The estimates of the best informed, place the yield of Winona county alone, in 1869, at between 3,000 and 4,000 bushels. From facts obtained from various sources entitled to credit, it is estimated that the total product of apples produced in the counties of Fillmore, Houston, Winona, Wabasha and Goodhue, in 1869, will reach 15,000 bushels. From the accumulating facts tending to the same conclusion, there is little doubt, that the prediction of Gov. Marshall, made in the course of his remarks before the Ramsey County Agricultural Society, that in less than ten years Minnesota will be an apple exporting State, will be justified by results.

In view of the remarkable success with which apples are produced in Maine, Canada, and the coldest countries of Europe, it is absurd to suppose there need be any apprehension of failure from mere cold weather in Minnesota. Besides, wheat and apples have always kept company as civilizers of mankind. As Minnesota vastly excels in producing the first, it is not unreasonable to expect she may the second.

MANUFACTURES.

Mr. Wheelock, former Commissioner of Statistics, a gentleman thoroughly conversant with the subject, makes the following just statement of the extraordinary manufacturing facilities which nature has lavished upon this favored State:

"1. Minnesota possesses a more ample and effective water power than New England. The falls and rapids of St. Anthony alone, with a total descent of 64 feet, affords an available hydraulic capacity, according to an experienced and competent engineer, of 120,000 horse power. This is considerably greater than the whole motive power—steam and water—employed in textile manufactures in England in 1850, and nearly seven times as great as the water power so employed.

"That is to say, the available power created by this magnificent waterfall, is more than sufficient to drive all the 25,000,000 spindles and 4,000 mills of England and Scotland combined. The entire machinery of the English Manchester and the American Lowell, if they could be transplanted here, would scarcely press upon its immense hydraulic capabilities. But as compared with those great industrial centres, the Falls of St. Anthony possess one decisive advantage, which is to a great extent illustrative of the functions of the State as a commercial and manufacturing emporium, this splendid cataract forms the terminus of continuous navigation on the Mississippi; and the same waters which lavish on the broken ledges of limestone a strength almost sufficient to weave the garments of the world, may gather the products of its mills almost at their very doors and distribute them to every part of the great valley of the Mississippi.

"The St. Croix Falls, which are only second to St. Anthony Falls in hydraulic power, are similarly, though somewhat less advantageously situated at the head of navigation upon a tributary of the Mississippi. Except the Minnesota, nearly every tributary of the Mississippi, in its rapid and broken descent to the main stream, affords valuable mill sites. The Mississippi itself in its descent from its Itasca summit to Fort Snelling, in which it falls 836 feet, or over 16 inches per mile, is characterized by long steps of slack water, broken at long intervals by abrupt transitions in the character of the rocks which forms its bed, and forming a fine series of falls and rapids available for hydraulic works. Pokegoma Falls, Little Falls, Sauk Rapids, and St. Anthony Falls, are the chief of these. But the Elk, Rum, St. Croix, and numberless smaller streams on the east slope of the Mississippi, the Sauk, Crow, Vermillion, Cannon, Zumbro, Minneiska, Root, and their branches, nearly all the tributaries of the Minnesota, and a multitude of streams besides, in their abrupt descent over broken beds of limestone or sandstone, through long and winding valleys or ravines, with a fall of from three to eight feet per mile, afford an unlimited abundance of available water power to nearly every county in the State. This diffusion of hydraulic power throughout the whole State, is a feature whose value as an element of development, can scarcely be over estimated, as it gives to every neighborhood the means of manufacturing its own flour and lumber, and affords the basis of all those num-

erous local manufactures which enter into the industrial economy of every northern community.

"2. Passing to the second point of comparison with New-England, already incidentally touched upon, the commercial position of Minnesota upon the termini of the three great water lines of the continent, not only gives it an immensely wider capacity of interior trade, but a far easier access to the sources of supply of raw material. A region six times as large as all New-England, as yet undeveloped, but already starting on the swift career of Western growth, and capable of supporting many millions of population, is directly dependent upon Minnesota for all the manufactured commodities it may consume. Its position relative to these Northwestern valleys, invests its manufacturing capabilities with an importance greater than those of any other of the interior districts of the continent. For the future manufacture of cotton and woolen fabrics, it has decided advantages of position over New-England. The Mississippi River brings it into intimate relations with the sources of the cotton supply, and it lies in the midst of the great wool zone of the continent."

Although not a tithe of these resources is yet developed, no inconsiderable progress has already been made in manufacturing industry. The following is a comparative statement of the number of manufactories and value of the product for the years 1860 and 1869, respectfully:

	No. of establishments.	Value of annual product.
1860, - -	511	$4,295,208
1869, - - -	1,650	14,831,043

The relative progress of the State in agriculture, population and manufactures, in nine years, is thus shown:

Increase of cultivated area, - -	290 per cent.
Increase in population, - - -	173 "
Increase in value of manufactures, - -	245 "

Minnesota has outstripped all the other States both in agricultural development and growth of population, and here is afforded the gratifying evidence that her progress in manufacturing industry has been even greater than the last, and approaches her astonishing advance in agriculture. The water power, mineral and agricultural resources, commercial advantages, and the enterprising character of the northern peoples by whom the State is settled, all indicate that Minnesota is soon to become conspicuous as a manufacturing State.

LOGS AND LUMBER.

As before observed, the head waters of the tributaries of the Mississippi and St. Croix rivers, are clothed with vast forests of pine timber. The entire valley of the Mississippi, stretching to

the Gulf of Mexico, and a vast extent of treeless country westward, are dependent upon these forests for their lumber. The annual cutting of logs and manufacture of lumber, constitute therefore an important branch of industry in Minnesota, affording an extensive field for the employment of men and capital.

The following shows the extent of lumbering operations on the two rivers and tributaries for 1869:

1st Dist. (St. Croix) No. feet of logs scaled, -	158,382,454
2nd Dist. (Mississippi) No. feet of logs scaled,	92,709,030
Total, - - - - -	251,091,484
Value of logs and lumber manufactured in first district for 1869, - - - -	$1,260,000.00
Value of logs and lumber manufactured in second district for 1869, - - - -	1,390,635.45
Total for two districts only, - - -	$2,650,635.45

COMMERCE.

The commercial position of Minnesota is perhaps the grandest among the States. Occupying the exact centre of this continent and constituting the water shed of its eastern half, the steam navigation of three great internal water systems terminates here, viz.: The Mississippi River, northward from the Gulf of Mexico; the Red River of the North, southward from Hudson's Bay; and the St. Lawrence River and chain of great lakes, westward from the Atlantic Ocean. Minnesota is thus the focus of three cardinal radii of a vast commercial system; the fourth radius, connecting her with the Pacific Ocean, will be supplied by the Northern Pacific Railroad, the construction of which is already commenced under circumstances which ensure its early completion, pushed forward as it is by the ablest capalists in the world. This road, constructed directly through our State, will be the shortest thoroughfare between Asia and Europe, and place Minnesota in the highway of the world's traffic. Here the whole trade of those converging water lines will break bulk, and constitute this State the entrepot and distributing theatre of a commerce whose extent and wealth it is difficult to over estimate. The completion of the St. Paul and Sioux City Railroad, now being constructed, will also place Minnesota in advantageous connection with the Union Pacific Railroad.

The interior water system and the great lakes will quickly be connected by a railroad from the head of navigation at St. Paul to the head of Lake Superior. This road will be completed during 1870, and will afford a new and invaluable outlet for the multiplying products of the State. The head of Lake Superior, while practically as near the seaboard as Chicago, at the head of Lake Michigan, has the advantage of being nearly 300 miles nearer the heart of those western areas whose exhaustless resources feed the vast commerce of those lakes. By this short cut our trade may avoid the circuitous and expensive route *via* Milwaukee and Chicago, the necessity of employing which has heretofore stripped us of our great natural advantages and made our position as much worse than that of intervening States, as it is more remote than they. But the end of these disabilities is at hand. Minnesota will speedily have the choice of the many diverging and converging channels of communication to which lavish nature and commercial sagacity justly entitle her.

The completion of the contemplated improvement of navigation of the Wisconsin and Fox rivers, which will make a continuous water path from the Mississippi River to Lake Michigan, will add another to the great routes which give to Minnesota her proud commercial position.

Hon. Wm. H. Seward, in a speech delivered at St. Paul in 1860, used the following striking language.

"Here is the place—the central place—where the agriculture of the richest region of North America must pour out its tributes to the whole world. On the east, all along the shore of Lake Superior, and west, stretching in one broad plain in a belt quite across the continent, is a country where State after State is yet to arise, and where the productions for the support of human society in other old, crowded States must be brought forth. * * *

"I now believe that the ultimate last seat of government on this great continent will be found somewhere within a circle or radius not very far from the spot on which I stand, at the head of navigation on the Mississippi River."

NAVIGATION.

The average length of the season of navigation on the Mississippi River and tributaries for a period of 26 years has been 226.42 days or 7½ months. The average number of steamboat arrivals at St. Paul for ten years was 821. The force of men and boats employed in navigation for the season of 1869, comprised a fleet of 62 steamers and 156 barges, with a total carrying capacity of 48,580 tons, operated by 1,703 men. With these 450,000 tons of freight and 255,800 passengers were carried, which comprised

somewhat less than the average amount of river business done for several years. This is acounted for partially by the recent depression of the wheat market causing farmers to hold back their crops and partly by the competition of the railroads. The above does not include navigation on other rivers, nor a rapidly increasing commerce on Lake Superior, upon which Minnesota has a shore line of 160 miles.

RAILROADS.

In 1857 Congress made a grant of lands in aid of a magnificent railroad system in this State. Half the land for six miles on each side of the proposed route of six extensive railroads was granted to the State in trust to be regranted to certain railroad companies in parcels on the completion of sections of the roads. After various hinderances arising from the financial crash of 1857 and other causes, the first mile was finally completed in 1862. To show at a glance the progress since achieved, it will suffice to say, that at the close of 1869 there were 750 miles completed and in operation, with 600 more under construction, and 2,000 miles additional projected—involving an aggregate actual capital of $23,550,398, operated by a force of 2,250 men—that their united earnings for 1869 were $2,653,630.07—their expenses $1,590,862.01; and that during the year they transported 677,684 tons of freight, and carried 478,973 passengers.

These railroads, as now located and constructed, are described as follows:

1st. The Southern Minnesota Railroad, running from the Mississippi River up the valley of Root River, in a due westerly direction, through the southern tier of counties in this State, piercing a country of great fertility its entire length. It is completed continuously 50 miles westward, from its eastern terminus to Lanesboro, and also a distance of 40 miles westward from its junction with the Milwaukee and St. Paul Railway, leaving a gap of 50 miles of uncompleted road between the points named.

2nd. The Winona and St. Peter Railroad, running from Winona westward, through an excellent and well-cultivated country, to the Minnesota River, and projected to the western boundary of the State. This road is completed to Janesville—116 miles—and will be finished to Mankato and St. Peter probably during 1870.

3rd. The St. Paul and Pacific Railroad, running from St. Paul to Breckenridge, on the Red River of the North, with a branch from St. Anthony, up the Mississippi River, to Sauk Rapids. Of the main line 103 miles are completed to Morris, in Stevens

County, to be completed to Breckenridge during the present year. This road runs through an extremely rich and beautiful country. The branch road is completed 78 miles to Sauk Rapids, and will be pushed forward to connect with the Northern Pacific Railroad.

4th. The Milwaukee and St. Paul Railway, starting from Minneapolis and St. Paul, uniting at Mendota, and running southwardly a continuous line to Milwaukee, 134 miles of the route being in Minnesota. This road is completed, affording at present the only all-rail route to the East. It runs through the heart of what is known as "Southern Minnesota," and is intersected by the Hastings and Dakota road at Farmington, by the Winona and St. Peter road at Owatonna, by the Southern Minnesota road at Ramsey, and by the Minnesota Central Railroad at Austin.

5th. The St. Paul and Sioux City Railroad, running from St. Paul up the charming and fertile valley of the Minnesota River, as far as its "great bend," and continuing south-westwardly to Sioux City, there to meet the northern terminus of the Union Pacific Railroad. This road is completed to Crystal Lake, a distance of 100 miles, and is speedily to be pushed to completion.

Subsequently to the Congressional land grant in aid of the above-named roads, other roads were started and aided by grants of land. These are—

The Lake Superior and Mississippi Railroad, from St. Paul to the head of Lake Superior, connecting the waters of the Mississippi with those of the great lakes. This road traverses a country rich in lumber and minerals. It is completed 77 miles, half the route, and is expected to be finished in time to transport the crops of 1870 by their new transit to the seaboard, *via* the great lakes.

The St. Paul and Chicago Railway, following the Mississippi River south-eastward to Winona, there to make connection with a road to Chicago. This road is completed to Hastings, 20 miles, and is under contract as far as Red Wing.

The Hastings and Dakota Railroad, from Hastings, on the Mississippi River, westward to the foot of Big Stone Lake, on the western boundary of the State, penetrating an excellent farming country. It is completed 30 miles at its eastern terminus.

Minnesota Central Railroad, completed 12 miles from Austin, southward, to the Iowa line, where it is to join a road now being constructed in Iowa.

These roads were completed or in progress at the close of 1869.

NORTHERN PACIFIC RAILROAD.

On the 15th of February, 1870, work was commenced on the Northern Pacific Railroad, at the Dalles of the St. Louis River. Large supplies of provisions have been stationed at various points along the projected route, and the work is to be pushed forward with all possible dispatch, under the auspices and with the aid of leading public men and heavy capitalists of America and Europe.

PROJECTED RAILROADS.

In addition to the roads completed or in actual progress, the following are projected, some of which will doubtless be commenced at an early day.

A road from St. Paul, eastward, to the St. Croix, opposite Hudson, Wis., to connect with the Tomah or West Wisconsin road, now in rapid process of construction towards St. Paul.

A road from Stillwater to connect with the Lake Superior and Mississippi Railroad, north of White Bear Lake.

A road from White Bear Lake, *via* St. Anthony and Minneapolis, to a point of junction with the St. Paul and Sioux City Railroad, thence to the Iowa State line, with various branches.

A road from St. Cloud, to run, *via* Sauk Centre and Alexandria, to the Red River of the North.

An extension of the St. Paul and Pacific Railroad, down the Red River Valley, to the northern boundary of the State.

A road from some point on branch line of the St. Paul and Pacific Railroad, to Princeton, in Mille Lacs County.

A road from Brownsville, on the Mississippi River, *via* Caledonia, to the Iowa State line.

A road from Chatfield, in Fillmore County, to the Iowa State line.

A road from Owatonna, *via* Albert Lea, to the south line of the State, there to connect with a road now in progress northward through Iowa.

A road from St. Paul, *via* Stillwater, to Taylor's Falls, on the St. Croix River.

A road from Lanesboro, Fillmore County, *via* Chatfield, Rochester, and Cannon Falls, to St. Paul, passing through the counties of Olmsted, Wabasha, Goodhue and Dakota.

A road from Lanesboro to the southern boundary of the State.

A road from the Mississippi River, starting at the city of Red Wing, thence *via* Cannon Falls and Faribault, to Blue Earth City.

A road from Wabasha, at foot of Lake Pepin, on the Missis-

sippi River, *via* Plainview, Rochester and Lansing, to Omaha, with a branch *via* Faribault to St. Peter.

A road from Minneapolis, up the west side of the Mississippi River, *via* Dayton, Monticello and Clear Water, to St. Cloud, thence up Sauk Valley, *via* Sauk Centre, to Alexandria, Douglas County.

An "Air and Hour Line Road" from St. Paul to Minneapolis and St. Anthony.

A road from Mankato, *via* Blue Earth City, to the Iowa line, thence to connect with the Keokuk and Fort Des Moines Railroad.

A road from Taylor's Falls, on the St. Croix, to connect with the Mississippi River and Lake Superior Railroad.

A road from Mankato, *via* St. Cloud, to the north line of the State.

A road from the western State boundary, *via* Mankato and Albert Lea, to intersect a road from Iowa, up the valley of Turkey River.

EXPORTS.

There were exported from the several railroad stations and shipping ports throughout the State during 1869, 10,463,512 bushels of wheat, and 460,101 barrels of flour, or, reducing the flour to wheat, a grand total of 12,764,017 bushels of wheat. This, be it remembered, from a State which eleven years before *imported* its wheat and flour!

EDUCATION.

No State enjoys more munificent provision for the education of her people than Minnesota. Very early steps were taken in behalf of several important measures for its promotion.

UNIVERSITY OF MINNESOTA.

The Legislature of 1851 provided for the establishment of the University of Minnesota, which Congress aided by a generous donation of lands.

In October, 1854, a beautiful wooded eminence, commanding a view of the Falls of St. Anthony and of the surrounding country, was selected as the site, and a portion of an imposing edifice was begun. After many struggles, the institution is now in full operation, with a classical, agricultural and military department, the total attendance being 230 students.

NORMAL SCHOOLS.

Three normal schools are in operation, viz.: The first at Winona, second at Mankato, and third at St. Cloud. At these there were at the close of 1869 a total of 373 students in the normal department and 444 in the model schools. A noble edifice has been erected by the State for the use of the first named school, and a building is partially completed at Mankato for the second normal school.

COMMON SCHOOLS.

An excellent system for the free education of all the children in the State is in successful operation in Minnesota. At the first session of the Territorial Legislature, in 1849, a law was enacted for the establishment of common schools. A partial organization of the system was effected the following year, and in 1851 a superintendent of common schools was appointed. In order to exhibit at a single glance the prodigious development of the common school system during the intervening 18 years, the few items embraced in the first school report in 1851 are contrasted below with the corresponding results for 1869.

	1851.	1869.
Whole number of school districts, - -	13	2,521
Whole number of school houses, - -	5	1,929
Aggregate value of school houses, - -	$2,500	$1,339,690
Whole number of scholars, - - -	250	102,086

The system was re-organized in 1862. A new law was that year enacted for the better regulation and support of common schools which, in its essential features, is still in force. The progress and present condition of the common schools of Minnesota will be seen by the following statement for 1863 and 1869 respectively:

	1863.	1869.
Whole number of school districts, -	1,685	2,521
Whole number of districts reported,	1,254	2,377
Number of districts not reported, -	431	144
Whole number persons between 5 and 21 years old, - - -	64,819	144,414
Whole number scholars in attendance	38,677	102,086
Per cent. of non-attendance, -	40	29.3
Whole number of teachers, - -	1,636	3,775
Whole amount paid teachers, -	$73,308.61	$360,697.50
Whole number of school houses, -	880	1,929
Total value of school houses, -	$160,591.32	$1,339,690.88

It will be remembered that these schools are perfectly free to the children of rich and poor alike, who meet upon terms of perfect equality and receive the blessings of education "without money and without price," pupils receiving marks of distinction only upon superior behavior and scholarly achievements.

A land endowment of two sections in each township, making one-eighteenth of the entire area of the State, has been set apart for the support of common schools. It is estimated that these lands will amount to nearly 2,900,000 acres. Of this immense domain, but 363,100 acres, or a little over one-eighth, have been sold, and already there is accumulated a fund of $2,371,199.31, which is exceeded by that of only four other States, three of these being the old States of New York, Massachusetts, and Ohio.

The principle arising from the sale of school lands in this State is guarded by constitution guaranty against diminution, and secured as a permanent fund, the interest of which, with proceeds of annual sales of grass and stumpage, constitutes the general or current school fund for semi-annual distribution. These proceeds, with an annual levy of a two mill tax, afford present support to the common schools of the State. If the residue of school lands shall be sold at prices equal to those heretofore obtained, the permanent school fund of the State will exceed $17,000,000.

Here is a generous bequest to coming generations in aid of that wide-spread education of the masses upon which must rest the durable structure of free government.

POPULATION.

The marvellous growth of population in Minnesota has been exceeded only by the advance of the State in agricultural development and manufacturing industry. When the Territory was organized in 1849 the population was 4,057. At the close of 1869 —20 years later—it was 470,000!

The following table will illustrate the total and relative increase, from the first Territorial organization:

Year.	Population.	Absolute Increase.	Percentage of Annual Increase.
1849 - - -	4,057		
1850 - -	5,350	1,293	31.6
1855 (estimated) -	50,000	44,650	166.9

Year.	Population.	Absolute Increase.	Percentage of Annual Increase.
1857 - -	150,037	100,037	100.0
1860 - -	172,022	21,985	14.9
1865 - -	250,099	78,077	9.0
1870 (estimated)	470,000	219,901	19.18

COMPARISON WITH OTHER STATES.

The following is a comparison of the growth in population between Minnesota and Iowa, since June 1, 1865:

		Ratio of Annual Increase.
Iowa, increase in four years to June 1, 1869, -	286,120	9.48
Minnesota, increase in four years seven months, to January 1, 1870, - - - -	219,901	19.18

—showing a relative increase in Minnesota more than twice as rapid as in Iowa.

The following is a comparison of the advance in population of the seven most flourishing States, during the greatest periods of their growth respectively:

		Rate per cent. of Increase.
Ohio, - - -	from 1800 to 1810	408
Illinois, - -	from 1810 to 1820	350
Indiana, - -	from 1810 to 1820	510
Michigan, - -	from 1830 to 1840	575
Iowa, - - -	from 1840 to 1850	347
Wisconsin, - -	from 1840 to 1850	891
Minnesota, - -	from 1850 to 1860	3,127

These figures, calculated in each case from the United States census returns, show Minnesota to have grown three and a half times as fast, during the time of her greatest advance, as the most rapidly growing State of the Union in the most rapid period of its growth.

The following table exhibits the comparative increase of the four northwestern States during what was probably the period of their slowest growth respectively:

	1860.	1865.	Actual Increase.	Ratio of Increase.
Illinois, -	1,701,740	2,163,000	461,260	27.1
Wisconsin, -	775,873	868,937	93,064	11.9
Iowa, - -	674,948	754,699	79,784	11.8
Minnesota, -	172,022	250,099	78,077	45.3

Favorable as is this showing for Minnesota, the comparison is nevertheless unfair towards this State, from the fact that of the three great hindrances to immigration during this period, viz.: the

civil war, the prolonged drouth of 1863–4, and the Indian outbreak, all of which operated in full force here, only the first was felt with equal force in the other States, the second affected them comparatively little, and the third none at all, except as it banished to them the refugees from the bloody massacre on our frontier.

CHARACTER OF THE POPULATION.

It is estimated that of the 470,000 inhabitants of Minnesota about 260,000 are of American ancestry, and 210,000 foreign born, probably in about the following proportions:

From the several German States, - - -	90,000
Scandinavians, - - - - - -	65,000
Irish, - - - - - - - -	45,000
Other countries, - - - - -	10,000
	210,000

The Western people generally are noted for a certain generosity of disposition and breadth of view favorable to liberality and tolerance in all matters of business, and of difference in religious and moral sentiments. People of all nationalities here mingle freely in the various relations of life, from which results an attrition preventing the growth of narrow provincialism. It is usually to a certain extent the extremes of Eastern society that emigrate to the West. Of a farmer's boys, the dull son remains upon the old homestead, while the more ambitious push for a wider field of enterprise. Hence, also the more daring and reckless, who have failed in business, come West for a new start in an untried field. With these are apt to come some unprincipled and lawless persons. There is a class of comfortable middle-aged men, who act as ballast in society, and who are never known to do anything good nor bad, who do not come West. They furnish a community its inertia, and occupy themselves principally in suggesting difficulties. In times past these persons might have served a purpose, when we were disposed to go too fast. But we outgrow the necessity for them as we learn wisdom from our own experience. In Minnesota, it may be claimed, is that desirable society generally which is compounded of the higher tone of the East, with the more generous and enterprising characteristics of the West. Our State is largely peopled by settlers from New York, and New England, who bring hither the colonizing agencies of school, press and church, which flourish gloriously in the prolific soil and invigorating air of Minnesota.

POLITICAL AND SOCIAL INSTITUTIONS.

GOVERNMENT.

Minnesota has a republican form of government similar to that of the other States of the Union, divided into three distinct departments: Legislative, Executive, and Judicial. The Legislative consists of a Senate and House of Representatives. Its sessions are annual, commencing on the first Tuesday of January, and limited to sixty days.

The Executive department consists of a Governor and Lieutenant Governor, a Secretary of State, Auditor, Treasurer, and Attorney-General, elected by a plurality vote of the people.

The Judicial power is vested in a Supreme Court, District Courts, Courts of Probate, and Justices of the Peace, which are also elected by the people.

The State Constitution secures to the citizen by naturalization, equal civil rights and immunities with the citizen native born. No property qualifications are required for the elective franchise; and "persons of foreign birth, who shall have declared their intention to become citizens, conformably to the laws of the United States upon the subject of naturalization, and who shall have resided in the United States one year, and in this State for four months next preceding any election," enjoy this privilege, in common with the native born or naturalized citizen. The alien, while enjoying the protection of the government, is exempt from performing military duty, or from the payment of money to secure such exemption, and is excluded only from some civil rights.

The State is divided into 73 counties, 54 of which are organized for judicial purposes, the assessment and collection of taxes, &c. The county officers consist of a Board of Commissioners, Treasurer, Auditor, Sheriff, Clerk of District Court, Judge of Probate, Register of Deeds, Surveyor, Attorney, Court Commissioner, and Coroner. Nearly all the organized counties are subdivided into townships, each of which elects its own officers, which consist of three Supervisors, Town Clerk, Assessor, two Justices of the Peace, two Constables, and an Overseer of Highways for each road district.

TAXATION.

The maintenance of the complicated machinery of government in a new country, where all institutions grow from the root, must be greater, relatively to the ability of the people, than in an old

and wealthy community. Yet in this respect Minnesota compares favorably with older States. Outside of some of our largest towns taxation is as low as in most of the Eastern States. The total State tax is but five mills on the dollar of valuation, and this valuation is invariably less than half the true value of the property. The local taxes differ in different counties and towns, the amount being dependent upon the extent of local improvements, and the good or bad management of county and township affairs.

PROPERTY.

The following is a statement of the assessed valuation of the real and personal property of Minnesota for the years named:

	Real Estate.	Personal Property.	Total.
1862 -	$24,791,888.31	$5,040,831.40	$29,832,719.71
1869 -	57,996,957.00	20,245,959.00	78,242,916.00

—showing the total value of property to have nearly thribbled in the seven years from 1862 to 1869.

But the above by no means shows the actual value of property, in consequence of the custom of assessing it at only a fraction of its real worth. The following statement shows more nearly the real value, being an estimate founded upon known facts and actual sales:

Value of land and improvements outside the limits of cities and towns, - - - -	$81,500,000
Lots in cities and towns, and improvements, -	38,500,000
Total value of real estate, - -	$120,000,000
Total value of personal property, - -	65,000,000
Giving a grand total of - - -	$185,000,000

DISTRIBUTION AND IMPROVEMENT OF LANDED PROPERTY.

The question of the concentration or distribution of landed property is deeply interesting as affecting the character and tendencies of modern civilization. The disbelievers in popular institutions affirm that while there is room and verge enough for surplus population, our cheap soil and abundant food will postpone the evil day, but as the rich grow inevitably richer, and the poor poorer, in the process of time the social problems which have convulsed Europe will one day clamor for solution among us, and bring the real test of our status among the nations of the earth. They point to England, whence came the seed of much that has already

attained to stalwart growth among us. There, the process of absorption has gone on so irrevocably that half the landed property of the island is in the hands of 500 owners, and the bread question is a more unsolved and momentous problem than ever.

Whatever force there may be in these evil prognostications, the liberties or the civilization of a people cannot be seriously threatened where, other things being equal, there is a wide and growing distribution of landed property among the people, and where the cultivators are also the owners of the soil, dictating the laws by which they are governed and the conduct of the common affairs in which they are most interested. As showing at last tendencies in a right direction, the following comparative statement of the number of soil proprietors in Minnesota will be interesting:

Number of land owners in 1864, - - -	50,805
Number of land owners in 1869, - - -	73,121

—showing an increase in five years of 22,316, or 43.9 per cent. But the rabid fever for speculation which prior to 1857 raged so extensively, that slow-moving industry was left far behind in the race for gain, was also a distributor of property in its peculiar way. It can hardly be considered a healthful or encouraging movement where property passes from hand to hand in the course of excited traffic without cultivation or development. The following statement is, therefore, valuable, as exhibiting the rapid improvement of the land which was once used so largely as a means for speculation:

Number of improved farms in 1864, - -	23,787
" " " 1869, - -	45,740

—being an increase in five years of 21,953, or 92.2 per cent., exhibiting the fact that while the number of land owners has increased 43.9, which is a gratifying circumstance as evidencing the distribution of landed wealth, the development of such wealth as shown in the improvement of farms has advanced 92.2, or more than twice as rapidly.

Similar movements are seen in the following statement, relative to lots within the various cities and towns:

Number of lot owners in 1864, - - -	25,084
" " " 1869, - - -	37,580
Number improved lots in 1864, - - -	14,900
" " " 1869, - - -	23,842

—showing an increase of 49.8 per cent. in the number of lot owners, and of 60 per cent. in the number of improved lots, and

further illustrating the fact before adverted to, that the idle and unproductive traffic in town lots which characterized the early settlement of the State, has given place to a rational exchange and steady development of this species of property, affording the best evidence of advancing and enduring prosperity.

The subject will receive further illustration by the following statement:

	1850.	1860.	1864.	1869.
No. acres in private hands,		6,404,491		11,000,000
No. of improved farms, -	157	18,081	23,787	45,740
Whole No. acres improved land, - -	1,900	433,267	575,000	1,690,000

HOMESTEAD EXEMPTION.

A very liberal law exists in Minnesota for the protection of the homes of her people against the effect of sudden reverses by which innocent families are liable to be thrown houseless upon the world's cold charities. The following is the language of the law of this State exempting homesteads from liability for debt:

"That a homestead consisting of any quantity of land not exceeding eighty acres, and the dwelling house thereon and its appurtenances, to be selected by the owner thereof, and not included in any incorporated town, city, or village, or instead thereof, at the option of the owner, a quantity of land not exceeding in amount one lot, being within an incorporated town, city, or village, and the dwelling-house thereon and its appurtenances, owned and occupied by any resident of this State, shall not be subject to attachment, levy, or sale, upon any execution or any other process issuing out of any court within this State. This section shall be deemed and construed to exempt such homestead in the manner aforesaid during the time it shall be occupied by the widow or minor child or children of any deceased person who was, when living, entitled to the benefits of this act."

Thus, without regard to cost—whether it be a cottage or a palace—the sanctities of home are guarded by the protecting arm of the law.

It is not improbable that advantage is sometimes taken of the liberal provisions of this law to cover the knaveries of dishonest men. This is a liability from which few humane laws are exempt; but there can hardly be serious danger in enactments which merely err on the side of mercy.

There is also a liberal exemption of personal property, consisting of the family bible, pictures, school books, musical instruments, church pew, cemetery lot, all wearing apparel, beds, stoves, and furniture not exceeding $500 in value; also a certain number of cows, sheep, and working team, with a year's food for the same; a

wagon, sleigh, and farming implements not exceeding $100 in value; also a year's supply of family provisions or growing crops, and fuel, and seed grain not exceeding 50 bushels each of wheat and oats, 5 of potatoes, and 1 of corn; also mechanics' or miners' tools, with $400 worth of stock-in-trade, and the library and implements of professional men.

LAW OF DESCENT.

When a person in this State dies possessing lands, &c., which have not been otherwise lawfully devised, his property descends, subject to his debts: 1st, in equal shares to his children and to the lawful issue of any deceased child; 2nd, if without children, to his widow during her life, and after her decease to his father, and directly to his father when no child or widow is left; 3rd, if no child or father be left, then to his widow during her natural life, and after her decease, in equal shares to his brothers and sisters, and also to his mother, if she be left; and so on to more distant relatives, the law regulating the descent of real property in a regular and equitable manner.

LEGAL PRACTICE.

Pleading in this State is according to what is known as "the code," substantially as practiced in New York.

CHARITABLE INSTITUTIONS.

The State has made generous provision for the maintenance and care of various classes of the unfortunate poor among her people.

A noble building has been erected at Faribault, and provided with every requisite for the care and education of the deaf and dumb and blind. There were 66 pupils in this institution in 1869.

A large building is being erected by sections, as required, at St. Peter, for the care and treatment of the insane, where 161 of these unfortunate persons were cared for in 1869.

A school for the reformation of depraved children destitute of proper protection and home influences, has been provided near St. Paul. A suitable and convenient building was erected in 1869, and additional land has been obtained for the employment of the inmates in farming and gardening operations.

POOR.

Although there are very few poor people in a State where food and labor are readily obtainable, yet provision has been made for their support by the several counties in the State. In several of

these, comfortable homes have been provided for the decrepid and destitute, and farms opened where such as are able may partially repay the cost of their support by their labor. Reports from half the counties in the State show that in 1869 there were 320 indigent persons maintained at an expense of $28,612.75, and that the proceeds of their labor amounted to $8,866.02.

POST OFFICES.

There were 465 post offices in Minnesota in 1862. In 1869 the number had increased to 594. In 113 of these there were 2,067,071 letters received for delivery in 1869.

NEWSPAPERS.

There are in all about 75 newspapers, periodicals, and magazines published in Minnesota.

RELIGION.

The number of churches, clergymen, and members of the several religious denominations in Minnesota, in 1869, was about as follows:

	Churches.	Clergymen.	Members.
Methodists, including Scandinavians,	76	129	8,214
German Methodists,	38	46	2,050
Presbyterians (Old School,)	53	43	1,600
Presbyterians (New School,)	46	44	2,285
Congregationalists,	68	60	2,581
Baptists,	143	99	4,728
Universalists,	15	11	
Episcopalians,	43	42	2,400
German Lutheran,	75	41	8,744
Scandinavian Augustina Synod,	30	25	4,735

Scandinavian Wisconsin Synod about as large as the Augustina Synod.

Catholics: whole number of priests, 58; churches, 105; stations, 89; with a total population, in 1858, of about 80,000 of Catholic sympathies and affiliations.

SUNDAY SCHOOLS.

The number of Sunday Schools in 1869 was 766, and scholars 44,152.

MASONS AND ODD FELLOWS.

There were in 1869, 5,500 Masons and 1,157 Odd Fellows in the State.

PUBLIC LANDS.

HOW AND WHERE TO GET THEM.

According to the latest surveys and estimates, the total area of Minnesota is 51,701,760 acres.

Of this total there are in the hands of private owners about - - - - -	11,000,000
Held by railroads, schools, &c., about -	11,000,000

—being a total absorption of 22,000,000 acres of the public lands, and leaving an area of nearly 30,000,000 acres—more than half of the entire State—for the landless and poor of all nations of the earth to enter in and possess. Here is a domain abounding in all the elements of health, beauty, and fertility—an area nearly as large as all the New England States, larger than many of the principalities of Europe, which awaits the developing hand of the frugal and industrious among all classes and conditions of men.

FREE FARMS IN MINNESOTA.

Under the provisions of the homestead law, every settler who is the head of a family, and a citizen or intended citizen of the United States, may become the owner of a farm of 160 acres without paying for it, by simply cultivating and residing upon the land for five years, and paying the fees of the land officers. And this land thus acquired without cost is exempt by law from liability for all debts previously contracted.

This privilege of obtaining free farms under the homestead law is shared by women equally with men, whether widows or unmarried ladies. The vast region thus open to free settlement comprises every variety of prairie and timber land, and tracts having both, and much of it is rich in minerals and supplies of pine lumber. In some places smooth level prairie and heavy timber abruptly come together; in others, the land is covered with a growth of bushes and small trees, with frequent groves and oak openings and belts of timber. In nearly every locality numerous lakes and streams water and beautify the country, while the soil is a quick, dark loam, which will yield every product known in the temperate zone.

Here every man may enjoy the reward of his labor, and become an independent land proprietor. However poor, he possesses equal rights and equal political opportunities with the rich and prosperous. He is governed by those whom he may choose to

elect, and he may himself, if capable and persevering, become the highest officer in the land. Minnesota invites the honest and industrious, however poor and friendless, to make themselves free homes in a country thus blessed with equal laws, a healthy climate, and a fertile soil. The manner in which this may be done is pointed out as follows:

LAND OFFICES.

For the convenience of all who may wish public lands, seven government land districts have been established in the State, in each of which is a land office. In each of these are two officers, called Register and Receiver, who conduct the business. The place of location of these offices, and the names of the officers, are as follows:

1st. For a district 30 miles wide, and extending from east to west through the State, along the south line, office at Jackson, in Jackson County. Register, J. B. Wakefield; Receiver, E. P. Freeman.

2nd. For a district 60 miles wide, extending east and west immediately north of the last named, office at New Ulm, in Brown County. Register, Tillson Tibbetts; Receiver, J. C. Rudolph.

3rd. For a district 30 miles wide, north of the above, office at Litchfield, in Meeker County. Register, J. M. Waldron; Receiver, J. C. Braden.

4th. For a district 24 miles wide, extending to the west line of the State, north of the 3rd, and also extending through the centre of the State northward, to the north boundary, office at St. Cloud. Register, C. A. Gilman; Receiver, T. C. McClure.

5th. For a district embracing the northwest portion of the State, along the Red River and the north boundary line, office at Alexandria, in Douglas County. Register, L. K. Aaker; Receiver, J. H. Vandyke.

6th. For a district lying between district last named and the St. Croix River, office at Taylor's Falls, in Chisago County. Register, J. P. Owens; Receiver, L. K. Stannard.

7th. For the remainder of the State, comprising the territory bounded by Lake Superior, by British America, and by districts 5 and 6, office at Duluth. Register, Ansell Smith; Receiver, W. H. Feller.

CLASSES OF PUBLIC LANDS.

There are three classes of public lands—

1st. All lands outside the 10-mile limits of the lines of the

several land-grant railroads in this State. These are held at $1.25 per acre.

2nd. All public lands comprising the even numbered sections within the 10-mile limits of railroad grants, which are $2.50 per acre.

3rd. The lands formerly reserved for the Sioux Indians, which, until offered for sale, are subject to pre-emption by actual settlers at their appraised value.

The two first may be had at all the land offices, and the third at the New Ulm and Litchfield offices only.

THE SEVERAL MODES AND COST OF OBTAINING LAND.

Compiled from official sources by J. C. Braden, Esq., Receiver U. S. Land Office at Litchfield.

HOMESTEADS.

Under the homestead law, the government grants the settler *surveyed* public lands to the value of $200—that is, 160 acres, at $1.25 per acre, or 80 acres at $2.50 per acre.

To obtain homesteads, the party must, in connection with his application, make an affidavit before the Register or Receiver that he is over the age of 21 years, or the head of a family; that he is a citizen of the United States, or has declared his intention to become such; and that the entry is made for his exclusive use and benefit, and for actual settlement and cultivation.

This affidavit may be made before the clerk of the court of the county within which the party is an actual resident. The fees and commissions for homesteads, when the entry is made, are as follows:

Acres.		Fees.	Coms.	Total.
160	outside railroad limits,	$10	$4	$14
80	" " "	5	2	7
40	" " "	5	1	6
80	within railroad limits,	10	4	14
40	" " "	5	2	7

Having complied with these requirements, and paid the fees as above, the claimant acquires an "inceptive right" to the homestead. He must then reside upon and cultivate the land continuously for five years, and at the expiration of that period, or within two years thereafter, he must furnish proper proof to the land officers of such settlement and cultivation, and make further payment of fees at the above rates, whereupon a certificate of Final Proof will be issued, and returns made to the General Land Office at Washington, upon which a patent, in due time, will be executed, conferring complete title to the homestead.

In making final proof on a homestead, the testimony of two witnesses as to settlement and cultivation is required, and they must have known the homestead settler during all the time he has made settlement on the land.

When a homestead settler dies before the consummation of his claim,

the heirs may continue the settlement and cultivation, and obtain title upon requisite proof at the proper time.

When both parents die, leaving infant heirs, the homestead may be sold for cash for the benefit of such heirs, and the purchaser will receive a title from the United States.

The sale of a homestead claim to another party by the settler is not recognized, and not only vests no title or equities in the purchaser, but is *prima facie* evidence of abandonment, and gives cause for cancellation of the claim.

When application is made for the cancellation of a homestead entry, on the ground of abandonment, the party must file his affidavit with the local land officers, setting forth the facts upon which his allegations are founded, describing the tract and giving the name of the settler. Upon this the officers will set apart a day for a hearing, giving all the parties interested due notice of the time and place of trial. After the trial, the land officers will transmit the testimony, with their joint report, for the action of the Commissioner of the General Land Office. The expenses incident to such a contest must be defrayed by the contestant, and no entry of the land can be made until the local officers have received notice from the General Land Office of the cancellation of the entry covering the same.

The law allows but one homestead privilege: a second entry cannot be made. When a person has settled upon surveyed land, and filed his Declaratory Statement therefor, he may change his filing into a homestead, when no adverse right has intervened; in such cases he must perfect his title under the pre-emption laws.

If the homestead settler does not wish to remain five years on his tract the law permits him (after a residence and cultivation of at least six months,) to pay for it with cash or warrants, upon making proof of settlement of cultivation from the date of entry to the time of payment. the proof of actual settlement and cultivation being the affidavit of the party, corroborated by the testimony of two credible witnesses.

There is another class of homesteads, designated as "adjoining farm homesteads." In these cases the law allows an applicant, *owning* and *residing* on an original farm, to enter other land lying contiguous thereto, which shall not, with such farm, exceed in the aggregate 160 acres. Thus, for example, a party owning or occupying 80 acres, may enter 80 additional of $1.25 or 40 acres of $2.50 land. In entries of "adjoining farms," the settler must describe in his affidavit the tract he owns and is settled upon as his original farm. Actual residence on the tract entered as an adjoining farm is not required, but *bona fide* improvement and cultivation of it must be shown for the period required by the statute.

Lands obtained under the homestead laws are exempted from liability for debts contracted prior to the issuing of patent therefor.

Women equally with men share the benefits of the homestead law, and instances are not unfrequent in which single ladies have availed themselves of their right to a homestead.

The homestead settler is allowed six months from date of entry within which to make settlement on his claim; thereafter continuous settlement and cultivation is required.

If the homestead settler fails to make final proof of settlement and

cultivation within seven years from date of entry, he forfeits all rights under the homestead law, and there is no provision of law for his relief.

PRE-EMPTIONS.

Under the laws regulating pre-emptions, a settler, after making a certain declaratory statement, is permitted to occupy and use 160 acres of either class of public lands *in advance of payment therefor,* on condition of actually residing upon and cultivating the land.

When the tract thus desired is among the lands which have been offered at public sale, the party must file with the District Land Office his declaratory statement as to the fact of settlement within *thirty days* from the date of said settlement, and within one year from that date, must appear before the Register and Receiver and make proof of actual residence on and cultivation of the tract, and secure the same by paying cash, or by filing warrant duly assigned to the pre-emptor.

When the tract has been surveyed, and *not* offered at public sale, the claimant must file within three months from date of settlement; upon *unsurveyed* land, the claimant must file notice of settlement within three months after the receipt of the township plat of survey at the District Land Office; and in both cases proof and payment must be made before the day designated in President's proclamation for offering the lands at public sale. The fee for a declaratory statement is $2.

A residence of at least *six months* on the tract, after date of settlement, by the pre-emptor is required before proof and payment can be made. A small expense attends making such proof.

Should the settler in either of the aforesaid cases die before establishing his claim within the period limited by law, the title may be perfected by the executor, administrator, or one of the heirs, by making the requisite proof of settlement and paying for the land, the entry to be made in the name of "the heirs," and the patent will be issued accordingly.

No person who is the owner of 320 acres of land in any State or Territory in the United States, or who quits or abandons his residence on his own land to reside on the public land in the same State or Territory, can pre-empt.

Any person being the head of a family, or widow, or single man over the age of twenty-one years, being a citizen of the United States, or having filed his declaration of intention to become a citizen, is entitled to the right of pre-emption, as is also a single woman of 21 years.

The pre-emptive right exists but once, neither can a person legally file but one declaratory statement. The claimant can only pre-empt the area of land embraced in his declaratory statement,—no more, no less,—that is, he cannot file upon 160 acres and pre-empt 80, or the reverse.

PUBLIC SALES.

The President of the United States from time to time, at his discretion, issues a proclamation designating the times and places when and where certain portions of the public lands will be sold at auction. They are usually offered in parcels of 80 acres, and are sold to the highest bidder, who receives immediately a certificate or receipt, and in due time a patent completing his title.

After the advertised lands have been duly exposed to public sale, such as remain unsold are subject to private "entry" for cash, or "location" by land warrants or scrip.

PRIVATE ENTRY.

Upon a written application to the register of the proper land office, designating the location and area of the land desired, the applicant may at once purchase such tract, if vacant, by paying the required price, which is either $1.25 or $2.50 per acre. Duplicate receipts are issued by the receiver, one of which is delivered to the purchaser, and the other forwarded to the General Land Office, upon which a patent will be issued and returned to the local land office, for delivery to the purchaser upon surrender of his duplicate receipt. Purchasers by private entry are not limited to any particular quantity of land. No fee for cash entries.

LOCATIONS WITH WARRANTS.

Application must be made as in cash cases, but must be accompanied by a warrant duly assigned as the consideration for the land; yet when the tract is $2.50 per acre, the party, in addition to the surrendered warrant, must pay in cash $1.25 per acre, as the warrant is in satisfaction of only so many acres at $1.25 per acre as are contained in the tract located. A duplicate certificate of location will then be furnished the party, to be held until the patent is delivered, as in cases of cash sales.

AGRICULTURAL COLLEGE SCRIP.

This scrip is applicable to lands not mineral, which may be subject to *private entry at* $1.25 *per acre*, yet is restricted to a technical "quarter section," that is, lands embraced by the quarter section lines indicated on the official plats of survey; or it may be located on a *part* of a "*quarter section*," when such part is taken as in full for a quarter; but it cannot be applied to different subdivisions to make an area equivalent to a quarter section.

The location of this scrip is restricted to three sections in each township of land.

The manner of proceeding to acquire title with scrip is the same as is required with cash or warrants. The land office fees attending the location of warrants or scrip is $1 for each 40 acres.

STATE LANDS.

The sixteenth and thirty-sixth sections in each township have been granted by Congress to the State, for the support of common schools. The total amount thus acquired will eventually exceed 2,800,000 of acres. Minnesota has also received about 146,000 acres in aid of the State University and Agricultural College. An excellent system for the gradual sale of these lands has been devised. They are placed under the control of the State Auditor, as Land Commissioner, and provision is made for their appraisal at

a price not below $5 per acre, and each year a quantity of these lands is offered at public sale in the several counties. The purchaser is required to pay in cash 15 per cent. of the amount of his bid for prairie land, and 25 to 75 per cent. for timber land, according to the value of such timber. On the remainder of the purchase money the purchaser is granted a credit of 20 years, at 7 per cent. interest, payable yearly, in advance; or he may at any time within that period pay the whole amount, receive a deed at once, and thus stop the accruing of interest.

These advantageous terms attract crowds of purchasers at the annual sales. The small sum required in cash enables the purchaser to employ his means for the improvement of the land, and frequently the profits of a single crop cover its original cost, while the land generally increases in value many fold long before final payment is required.

RAILROAD LANDS.

The several railroad companies of this State offer large bodies of lands lying along the routes of their roads, the facilities for transportation of farm products thus afforded rendering such lands very desirable.

The Southern Minnesota Railroad Company offer a variety of lands of good quality, at from $3 to $8 per acre, upon long time, with reasonable interest. Office at La Crosse, Wis.

The Winona and St. Peter Railroad Company confine their sales to actual settlers, to whom they offer land at $5 per acre, the purchaser paying three years' interest in advance, at 7 per cent., and the principal, after the expiration of that time, in four annual instalments. This road traverses an excellent country. Office at Winona.

The First Division St. Paul and Pacific Railroad Company offer lands along both their main and branch roads, at from $5 to $10 per acre for cash, or on ten years' credit at 7 per cent. interest. These lands embrace a great variety of timber land, prairie, and meadow. Office at St. Paul.

The Lake Superior and Mississippi Railroad Company sell their lands at from $4 to $8 per acre, upon a long credit, at 7 per cent. interest, the purchaser having the privilege of making full payment at any time. There is little or no prairie among these lands, but they comprise a variety of openings and forests of pine and hard wood and abound in meadows and lakes and deposits of minerals. This road, when completed, will afford the shortest and most direct transit to the seaboard. Office at St. Paul.

The St. Paul and Sioux City Railroad Company offer lands at $5 to $10 per acre—one-tenth cash, one-tenth in one year, and balance in four equal annual payments, at 7 per cent. interest in advance. This road traverses the valley of the Minnesota River, and will eventually be a branch of the Union Pacific Railroad. These lands embrace both heavy timber and prairie.

The Milwaukee and St. Paul Railway Company offer their lands upon similar advantageous terms. Office at Faribault.

PRIVATE LANDS.

Unimproved lands in the hands of private owners, accessibly situated among settlements, and frequently within five to eight miles of large towns, which afford good markets for vegetables and dairy products, can be purchased at from $4 to $15 per acre, partially upon credit. Lands of fair quality are offered at $5 to $20 per acre, within ten miles of St. Paul, a city of 19,000 inhabitants, where high city prices are eagerly paid for all garden and dairy products, and where manure for enriching second-rate land is gladly given to farmers who will haul it away! Similar opportunities are presented in the vicinity of other large and growing towns.

Farms of various degrees of improvement are frequently offered for sale at from $12 to $40 per acre, such price being often less than the cost of the buildings and fences. These cases occur not from the undesirable character of the property so much as from the restlessness and love of change characteristic of Western people.

MANNER AND COST OF STARTING FARMS.

A settler can take a homestead embracing portions both of woodland and prairie, and by working at wages for six months before occupying it, earn a little money for a start, and then by tact and industry can gradually carve himself a home with scarcely an appreciable outlay of actual cash. An expenditure of $40 for sash, doors, &c , will complete a cabin in which a family may be sheltered comfortably. If sufficient timber grows upon the land, fencing and sheds may be constructed by the farmer's own hands which will answer a good temporary purpose. The abundance of unoccupied land affords a wide range of free pasturage for his stock, which relieves him from the necessity of division fences. Posts planted firmly in the ground with forked ends upward, for the reception of strong beams upon which cross poles are laid, and

then threshed straw stacked thereon, afford good shelter for stock —much better in our dry cold winters than in the sloppy, murky, and chilly winters further south.

If the settler be provided with some means, and aims at larger operations and quicker results, he can take smooth prairie land, and, if the situation be not too remote, can make the required improvements with sawed lumber. To enclose 160 acres will require two miles of fence, the lumber for which is cut into boards one inch thick, six inches wide, and 16 feet long, two lengths of these counting as one according to board measure. Tamarack affords good posts, and oak, locust, and pine are also frequently used. These are set into the ground eight feet apart and the boards nailed to them. At the present prices of lumber and nails in the St. Paul market, the materials necessary for enclosing a quarter section of 160 acres will cost about $540. The additional cost of the material will depend upon the remoteness of the land; and of the completed fence, upon the price of labor paid for setting it. The cost of the necessary lumber for a one-story frame house 16 by 22 feet is from $75 to $100, and the total cost of the completed house, from $350 to $500. These figures will serve as a basis for calculation, larger tracts being fenced and larger houses constructed at proportionably less cost. A cheaper fence is made by throwing high furrows together forming a ridge, into which are driven small posts sharpened at one end. To these, two boards are nailed, forming, with the ridge of earth beneath, a fence sufficiently high and strong to answer a good purpose, if well constructed. Farm horses are $75 to $150 each; cows, $25 to $40; and oxen, $60 to $200 per yoke. First "breaking" costs $2.50 to $3.00 per acre for clean prairie, and from $5 to $8 for brush land. These prices will afford sufficient clue to allow of close estimates for different scales of operations, to which may be added the fact that the total cost of producing an acre of wheat beginning on new land, purchasing the seed, and hiring all the labor, and including interest on the cost of the land, ranges from $8 to $15 per acre. Where the latter is the expense, it is plain that there must be a good yield or a high price, or both, to recompense the cost of production. Just now Minnesota wheat growers are suffering from low prices for a crop which from a conjunction of circumstances was unusually costly to produce—wiping out completely their margin of profit. But usually there is a profit of from $4 to $15 per acre on wheat, and frequently much greater. Wisdom, however, teaches a diversification of husbandry which shall place the farmer beyond the vicissitudes of a single crop.

WHEN TO COMMENCE.

To the man of means any portion of the year is a favorable time for coming to Minnesota. But to the mechanic or laborer, and especially the poor man who expects his support from the soil, the value of time is an important consideration. As a rule, the fall is the worst time for the two first named to come, while early spring is probably the best for all. If the immigrant reaches his land by the middle of June, he is too late to produce most crops the same season, but he is yet in time for corn, potatoes, and turnips. For the first, let him turn over the virgin sod, chop holes therein with an axe and drop in the seed, which, if the season be favorable, especially a wet one, will produce a tolerable crop. The second may be dropped into the furrow and covered by the plough with the tough sod, and will grow through it; while turnip seed may be sown on the freshly turned sod and very slightly covered. June is the best month for breaking wild land, especially prairie, while the breaking season should not begin earlier than the middle of May nor be prolonged beyond the first of August. A particular stage of vegetation of the overturned sod is necessary for its rapid decay, and frequently more harm than good to land which is first unseasonably plowed.

WHAT MONEY CAN DO.

Of course capital, directed by sagacity and enterprise, possesses great advantages in Minnesota as elsewhere; indeed the new avenues being continually opened by the rapid development of a bountiful new country like Minnesota, multiply the opportunities for its profitable employment. There is scarcely a reputable vocation of any kind wherein the same capital and good management which insure success in Eastern communities, will not yield far greater returns here. The legal rate of interest, when not stipulated, is 7 per cent., but any rate agreed upon not exceeding 12 per cent. is lawful. At the latter rate money may be safely loaned amply secured by mortgage. Judicious investments in real estate, owing to the rapid settlement and development of the country, are sure to realize large profits. Purchases both of city lots and farming lands can be made almost anywhere at all times which will command an advance of 25 to 50 per cent. within a year, and not unfrequently such advance is 100 to 200 per cent. annually. The time was when this could be done without discrimination by the venturer, the sole condition of acquiring fancied wealth being to take hold! Now good judgment is required to cause real estate or any active business to yield better returns than money commands at interest. And that is just

the difference between 1857 and 1870—the difference between the senseless contagion of wild excitement, and the cheerful exercise of alert and sober good sense.

WHAT PLUCK AND MUSCLE MAY DO.

Great as are the unquestionable advantages which a union of money and industry possesses here as elsewhere, there is no country under the sun where unaided muscle, with a plucky purpose, reaps greater rewards than under the bright skies and helpful atmosphere of this fair land. Feeling himself every inch a man as he gazes upon the unclaimed acres which shall reward his toil, the settler breathes a freer air, his bosom swells with a prouder purpose, and his strong arms achieve unwonted results. Minnesota is emphatically the place for men whose capital consists of brawny arms and brave hearts. Any man possessing these, may do as thousands who have little else, annually do in this State—select a homestead, in some one of the many beautiful and fertile regions into which railroads are rapidly penetrating, after which, being allowed six months before settling upon the land, he may work upon the railroad or upon a neighboring farm, and earn enough money to make a start as his own master in a small way; and by the time he produces a surplus, the railroad is at his door to take it to market—he finds himself not a lone settler, encountering the hardships of frontier life, but in daily communication with the busy world, and the proud possessor of a valuable farm which has cost him little but the sweat of his brow.

EXAMPLES OF SUCCESSFUL FARMING.

Let a few cases be cited as to what has been accomplished by different classes of settlers.

A capitalist, a lawyer by profession, failing in health, engaged in farming on a large scale, using money to improve and conduct operations in the best manner, realized these results: On three farms of 2,000 acres, 1,700 were in wheat. His yield in 1867 was 35,700 bushels, gross price $53,550, profits $14,500; 1868, yield 39,000 bushels, net profits $20,400. His profits would have been larger, except for the extremely high prices which ruled in 1866—seed wheat costing $2 50 per bushel, with corresponding disbursements for first breaking and other expenses. These expenses include interest on the capital employed in land, stock, implements, &c. The original cost of the land averaged about $12 per acre; so that after allowing amply for the expenses of building, fencing, and other improvements, the net profits on two years' crops were more than sufficient to cover the whole, while the market value of the land and improvements is to-day nearly or quite three times their first cost.

A Swede, who settled first in Illinois, and there caught the "chills and fever," after losing much time and money in the vain effort to recover his health, came to Minnesota lean, depressed, and poor, with a remnant of

$2.50 as his fortune to start anew. He worked among the farmers until he had saved enough to purchase a span of horses and a few implements, and then purchased 120 acres of land at $12 per acre, paying in hand a merely nominal sum, and agreeing to pay the balance in three annual instalments, with 7 per cent. interest, the first payment to be made when he should have obtained his first crop from the land. He sowed his entire farm in wheat, which produced 20 bushels per acre, making an aggregate of 2,400 bushels, which he sold at $2.50 per bushel, or a total of $6,000, paying for the land four times over with a single crop; and after paying for land, expenses, and improvements, leaving a clear balance of $3,000. He then sold his farm for $27 per acre, or a total of $3,240, which, added to his net profits, gave him the sum of $6,240, with which he started anew by taking a homestead, for which he paid—nothing! Of course, in this case, the extraordinary profit was greatly the result of the exceptionally high price of wheat; but it is obvious that with one-third such price—the expenses being also less—there would be a handsome margin of profit, while there are continually recurring chances of sudden high prices which afford brilliant results.

A shrewd, cautious immigrant from an Eastern State came to Minnesota in 1856 with little means, and averring that he was "not edicated nor smart enough to git rich by tradin' in corner lots," which was the vocation then generally pursued, concluded he would feed those who were thus engaged, and so quietly took up a Government 80 at $1.25 per acre, ten miles from St. Paul, and commenced raising vegetables, butter, cheese, &c., for which he realized New York prices in St. Paul: and when the rich speculators went down he relieved their necessities by purchasing their property for a song; and he is to-day one of the solidest men in the State—out of debt, with money at interest, and living generously on a farm of 640 acres, splendidly improved and stocked with fine cattle and blooded horses.

An ambitious farmer from Maine came to Minnesota at an early day, having little capital beyond that of an active brain and skilful hands. Captivated with the appearance of our smooth rich prairies, contrasted with the bleak hills he had left in Maine, he committed the common mistake of buying too much land, by which he kept himself poor and embarrassed through many weary years of struggle. But by persistent effort and the wonderful aid of labor-saving machinery, he managed to obtain each year a larger margin of profit, until finally a lucky year of high prices made his fortune, whereupon he rented his farm for a third of the crop, upon which he lives at his ease on $4,000 a year.

A Mr. William Buck settled in Mower County in 1856. He had sufficient means to purchase 480 acres of land at Government price, upon which he went to work. His labor was reasonably rewarded. After seven years of hard toil and economical living, he began the erection of a handsome residence, which he finished in 1864. His barn will accommodate 160 head of horses and cattle, 225 tons of hay, and the bins will hold 10,000 bushels of grain. The upper floors are laid with two-inch plank. Mr. Buck last year sold $6,000 worth of stock, and has now on hand some 50 head of horses and forty head of cattle. He has under plough 220 acres, besides 120 acres in timothy grass.

Mr. Andrew Barlow settled in Freeborn County, in October, thirteen

years ago. He was compelled to leave his family in New York for want of means to bear their expenses to Minnesota, and only reached here himself by stopping at times on the way to earn money. By industry and economy he accumulated enough during the first winter to send for his family in the following spring. He is now the owner of an excellent farm of 320 acres, with full equipment, including a house worth $800 and a barn worth $1,000, with a partial ownership in a threshing machine.

An immigrant from Michigan settled first in Dakota County, and after considerable hardship sold his claim for only $100. Feeling considerably discouraged, he was tempted to return to Michigan, where he was offered land to rent on very favorable terms by a relative; but he finally decided to make a new trial here, and with his meagre $100 and a wagon, plough, and *one ox*, with a family of five children, and winter confronting him, pushed for the extreme frontier, made a "claim," and commenced work. He is now independent, owning a farm for which he could take $5,000, besides ample stores, stock, and utensils.

Frederick Hilderbrand writes Robertson's *Monthly* his experience with a 27 acre farm near St. Paul, which he purchased over two years ago, in a wild state. He had been a mechanic in the city, knew nothing of farming, but went into it as the only escape from early death. He says: "I have farmed this land two years—only part in cultivation. It pays. Here is the result for the first year. First, we have had our living, except clothing and groceries, from the farm. We sold butter to customers to the amount of $769.60. This was the product of eight to nine cows. We sold eggs and chickens for $176, and pork and garden stuff for $330; making in all $1269 cash income; and paid out in expenses for the help of a man on the farm and a girl in the house, about $300. Myself and wife, both being in poor health, have not done much work—and no hard work. We have depended almost entirely upon hired help, but I have always looked closely after my business and directed the work."

A Minnesota farmer writing to the *Hearth and Home*, says: "A man rented 160 acres of newly-broken prairie land near me last spring, and got but one-half the crop; but with that he paid $2,000 for the land, and now owns a farm upon which $4,000 worth of grain was raised this year (1868,) with wheat at but a little over $1 per bushel."

WAGES.

Stone masons and plasterers, $4 to $5 per day; carpenters, $2.75 to $3.50; blacksmiths, $2 to $3; day laborers, $1.50 to $2.00; laborers on railroads, $1.50 to $2.00; farm hands, $15 to $25 per month; teamsters, $30 to $60; choppers, $35 to $40; wages on lumber rafts, $30 to $40; clerks in stores, from $600 to $1,500 per annum.

EMPLOYMENT.

For persons having fixed, definite occupations—for tradesmen, artisans, and persons skilled in mechanical work of all kinds, especially for those with the inclination and strength for agricultural labor, there is nearly always an active demand in Minnesota. For persons with that indeterminate notion of work which is limited to the idea of "situations" there is little demand anywhere;

and it ought to be understood that here there is less room for that class than elsewhere. This is owing to the large number of persons who seek Minnesota for health, who, having neither the means nor disposition to remain idle, more than supply the limited demand for clerks and various kinds of light labor.

HOW TO GET TO MINNESOTA.

Foreign immigrants landing in Portland or Quebec, may come westward by way of the Grand Trunk, Great Western, and Michigan Central railroads to Chicago, which is the central depot for a large portion of the Northwest. Those landing in New York may take the New York Central or New York & Erie and reach Chicago either by way of the Great Western and Michigan Central, or the Lake Shore and Michigan Southern railroads; or they may reach Chicago by the Allentown, Pittsburgh & Fort Wayne route. From Chicago the immigrant can reach, by railway, the Mississippi at various places, of which La Crosse is the nearest to Minnesota. At any of these places he will find boats waiting to take him to St. Paul and intermediate stations; or he can reach St. Paul by all rail, coming by way of Prairie du Chien. If his destination is the southern part of the State, he can land at Winona, Red Wing, Hastings, or some other of the landings in that section. If the lumber district of the northeastern portion of the State is the place of his visit, the steamer will take him to Stillwater, on the St. Croix. If he seeks the Valley of the Minnesota, he can either change boats at St. Paul, or take the cars there, and ascend that river. If bound for the Valley of the Upper Mississippi, a railway from St. Paul will take him to St. Cloud, from which point he can proceed northward or westward by stage. If the Valley of the Red River of the North be his destination, the cars will take him from St. Paul to a point within 40 miles of that river, and entirely to its banks probably within a few months.

During the present year immigrants may find a more direct route to Minnesota through Lake Huron to Duluth, at the head of Lake Superior, and thence by railroad to St. Paul.

The present fare from New York to St. Paul, is by first class cars, $42.95; by immigrant cars, $27.50

WHO SHOULD COME TO MINNESOTA.

Young people of either sex, however poor in cash, if rich in courage, hope, and strength, may be encouraged to come to Minnesota at all times. It may not be advisable for those advanced in years, or those who are comfortably settled in old and well established communities, to incur the hazards incident to a

removal to a new country. And it should be further understood that the wholly destitute will encounter at first greater hardships here than those they seek to escape. Northern countries are usually more prosperous than those of languid climates, largely because of the greater stimulus the energies receive in guarding against hunger and want, for which reason it is of course more difficult for the feeble and destitute to find maintenance; but to the thousands in the older States and in foreign countries, whose only resource is the labor of their hands, who, on looking around, see every avenue to manly independence thronged by jostling multitudes, and the only alternative left them emigration or dependent labor; to all such we offer the testimony of an English writer—"Minnesota affords the finest and most inviting field for emigration in the world." Our State needs an actual settler upon each quarter section of her millions of unoccupied lands, to give beneficent action to the idle richness slumbering in the black soil.

A great English writer has said: "Formerly the richest countries were those in which the products of nature were the most abundant, but now the richest countries are those in which man is the most active." In Minnesota we may justly claim that both essentials are found in full measure. Our bountiful soil ensures the first, and our bracing atmosphere the second. Moreover, thanks to the beneficent wisdom of that generous legislation which finds no parallel in the history of human enactments, every man is here given a farm upon the simple condition of laboring five years *in his own service.*

The world's plaudits have too long been for men and nations whose power was evinced in devastation. The law of might partitioned the spoil among the conquerors. It is the glory of America that she acquires territory by purchase, and distributes it among the landless of all nations. In Minnesota is found the fairest domain upon which the blessings of this new dispensation receive practical exemplification. A cordial welcome is extended to all to come and partake of the national bounty, and when, with all the advantages with which lavish nature has endowed our State, it is considered that here also may be possessed the perfect health requisite for their highest enjoyment, it is not too much to claim that Minnesota presents unequalled inducements to those in search of new homes.

The reader is referred for further information of the State to J. W. McClung's recent work, "Minnesota as It Is in 1870," treating of the State, every country and town, and the regions northwest to the Pacific. Sent by mail, post-paid, for $1.25, by J. W. McClung, St. Paul.

DESCRIPTION OF MAP.

For the convenience of a ready description, the State is marked on the accompanying map into six general divisions. This is made less with reference to any geological or topographical characteristics than with a view to convey to new-comers the practical knowledge they desire to aid them in selecting their homes and deciding the character of their avocations.

No. 1 of this general division comprises the portion of the State to which the present population and absorption of the public lands are chiefly confined. While it embraces considerable diversity in its topographical features, in the character of its soil, the quantity and variety of its timber, the peculiarities of agricultural pursuits, and the nationalities and character of the inhabitants, there is nevertheless practically an essential similarity and equality in its general character—the preference of any given portion over another being much a matter of taste as to beauty of landscape, choice of society or specialty of agricultural pursuit.

It is well supplied with railroads, completed and in progress. 1st. The Southern Minnesota, completed in all ninety miles; 2d. The Winona and St. Peter, completed one hundred and sixteen miles; 3d. The Hastings and Dakota, thirty miles; 4th. The St. Paul and Chicago, following the Mississippi as far as Hastings, twenty miles; 5th. The Lake Superior and Mississippi, to connect river with lake navigation; 6th. The St. Paul and Pacific branch line up the Mississippi to Sauk Rapids and main line westward towards Breckenridge; 7th. The St. Paul and Sioux City, one hundred miles; 8th. The Milwaukee and St. Paul Railway from Minneapolis and St. Paul, uniting at Mendota and running southward as part of a continuous line to Milwaukee; and 9th, the Minnesota Central, from its junction with the last named road at Austin, directly south to the State line.

Bordering the Mississippi river from near the mouth of the St. Croix to the southern boundary is a bold, bluffy country, rising from one hundred and fifty to five hundred feet above the level of the river, varying in width from two to twelve miles; through this

belt numerous streams make an abrupt descent to the river, affording a large amount of valuable water power. In this hilly belt have been most successful the experiments of apple raising, many orchards throughout its extent having come to bearing within the past two years. Westward of this region the country is a high rolling table land, for the most part prairie, with belts and fringes of timber along the streams and lakes. This prairie land extends westward until the headwaters of the tributaries of the Minnesota River are approached, where the country is more diversified with timber, streams, lakes and meadows.

Crossing this division in a northeasterly course the Minnesota River, coming first from the northwest, flows until it joins the Mississippi six miles above St. Paul. Crossing this river nearly at right angles is an immense body of timber, of nearly every variety, known as the Big Woods. This forest covers a portion of Stearns, Meeker, McLeod, Sibley, Hennepin, Nicollet, Le Sueur, Blue Earth and Scott, and all of Carver and Wright counties. Inhabitants of American birth preponderate in nearly every part of the State, yet large settlements of Scandinavians exist in portions of Blue Earth, Nicollet, Houston, Fillmore, Freeborn, Goodhue, Chisago, Watonwan and Meeker counties. The counties of Scott, Carver, Sibley, Dakota, Le Sueur and Brown are largely settled by people of foreign birth, mainly Germans and Irish, yet a good proportion of persons of native birth reside in each. Considerable bodies of Welsh are settled in Blue Earth, Fillmore, Le Sueur, Martin and Watonwan counties.

There is little government land remaining in this division, except near its northern and western border. Unimproved land can be purchased from individuals at from $3 to $15 per acre, according to soil, timber and advantages of neighborhood, and improved farms at $12 to $50 according to degree of improvements, soil, locality, &c.

No. 2 occupies the southwest portion of the State south of the Minnesota River. It has generally a gently rolling surface and a deep, rich soil; is tolerably well watered by streams and lakes, but is deficient in timber, which is generally confined to the water courses. Beds of coal have been found on the Cottonwood River. The Southern Minnesota and St. Paul and Sioux City railroads are both projected through this division. Homestead and other government land can be obtained in nearly every portion. The U. S. Land Offices are at Jackson and New Ulm.

No. 3 lies north of the Minnesota River and south of the proposed route of the Northern Pacific Railroad. This is the region

so much admired for its charming alternations of prairie and forest, upland and meadow, its sparkling streams and limpid lakes, which beautify its landscape and answer the practical needs of agriculture. The soil is generally a dark loam of great fertility, well adapted either to grain growing or stock raising. Timber is perhaps as a whole somewhat deficient, but fine bodies grow around its numerous lakes and along its streams. Forests of pine are found in the northern portion. The Northern Pacific Railroad will probably run along the northern border, while the main line of the St. Paul and Pacific is already well extended into this division, running in a northwesterly direction, and will be completed the present year to the Red River of the North. There are settlements in the eastern portion and along the Minnesota River composed of Americans and persons of foreign birth, the latter being principally Scandinavians. Excellent land may still be had of the Government in nearly every portion. Land Offices at New Ulm, Litchfield, St. Cloud and Alexandria.

No. 4 lies north of the last named, embracing the eastern portion of the Red River valley and extending to the northern line of the State. Its general characteristics are similar to those of No. 3, with a soil perhaps equally fertile but possessing less timber and water and less diversification of surface. This division is little settled or cultivated, and excellent land may be obtained in any part of it. The Northern Pacific Railroad is expected to traverse its southern border, and a branch of the St. Paul and Pacific to run through it northward to British America. Land office at Alexandria.

No. 5 lies mainly between the Mississippi and St. Croix rivers. This division is little settled except along its southern border. It is crossed by veins of good land, and has large bodies of hard wood timber, but it is chiefly esteemed for its inexhaustible supplies of pine which clothe the head waters of its streams, and also for its deposits of minerals in the northeast portion, among which slate is found of excellent quality and in immense quantities. This division is traversed by a branch of the St. Paul and Pacific Railroad, running along the Mississippi on the west, and by the Lake Superior and Mississippi Railroad through the eastern portion. Abundant quantities of good land may still be obtained in every portion. U. S. Land Office at Taylor's Falls.

No. 6 occupies the northeastern portion of the State, having a shore line of one hundred and sixty miles on Lake Superior. This region is supposed to be inferior for all purposes of agriculture, although it has a fertile soil in many localities. It is valuable

principally for its supplies of timber and exhaustless mineral resources, which have been shown by scientific exploration and analysis to embrace numerous varieties of great value, which will one day richly reward the capital and labor employed in their development. This division is wholly uninhabited, except on the immediate shore of Lake Superior, to which the government surveys have as yet been confined; but it is destined soon to attract public attention, as both the Northern Pacific Railroad and the road connecting the navigable waters of the Mississippi and the great lakes, terminate at Duluth, operating not only to bring that place into commercial importance but to render that whole region more accessible and accelerate the development of its varied resources. Land Office at Duluth.